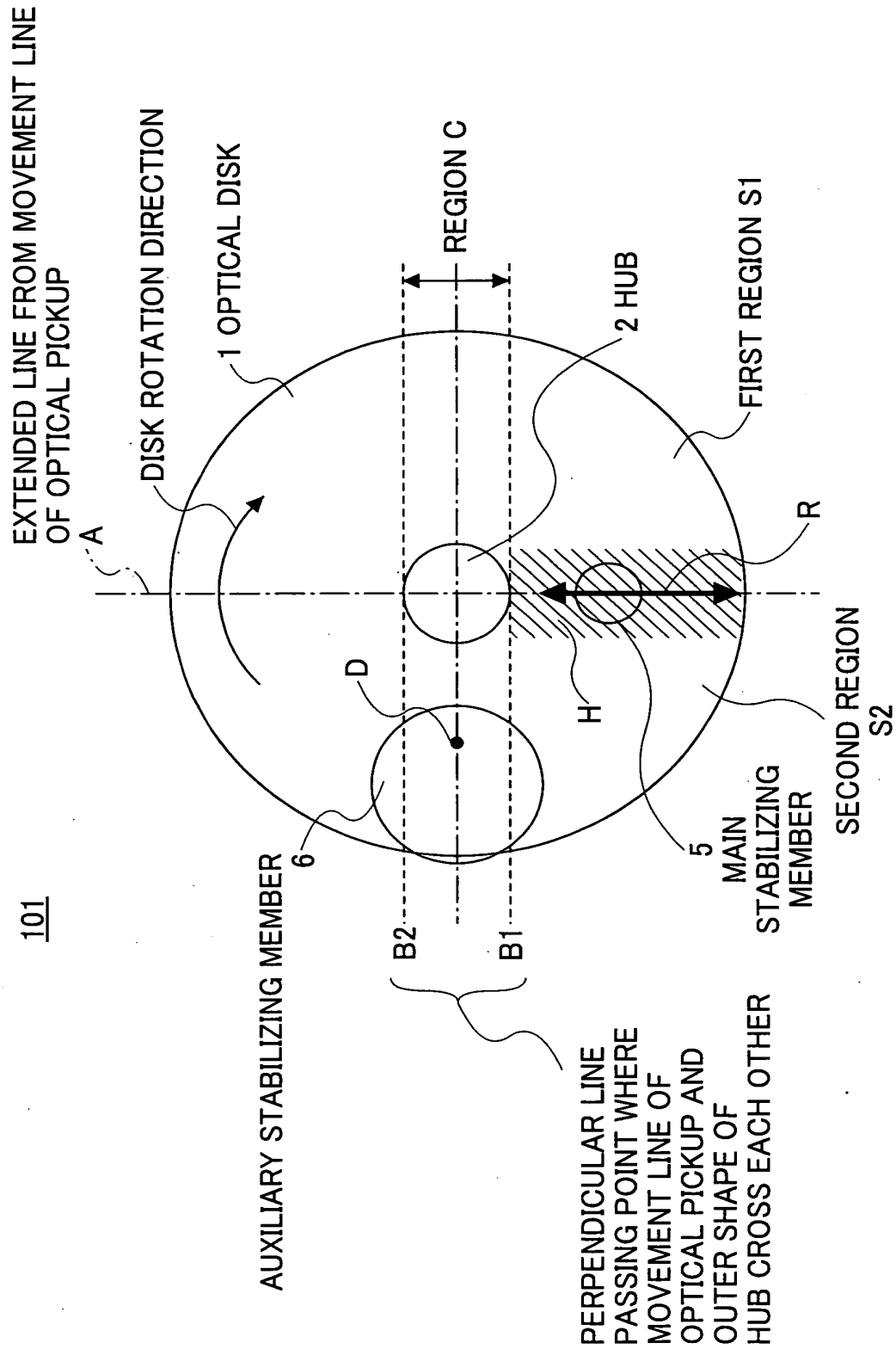


FIG.1



**FIG.2**

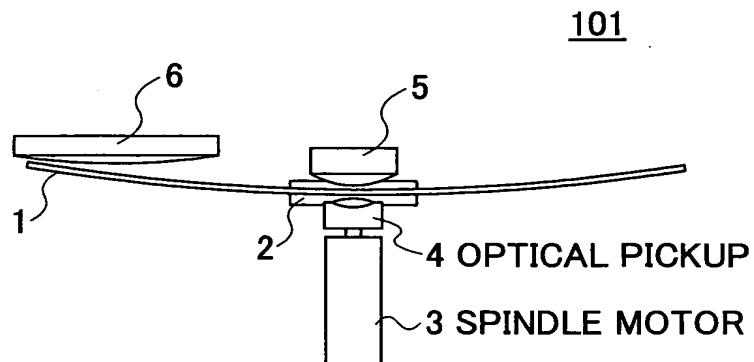


FIG.3

102

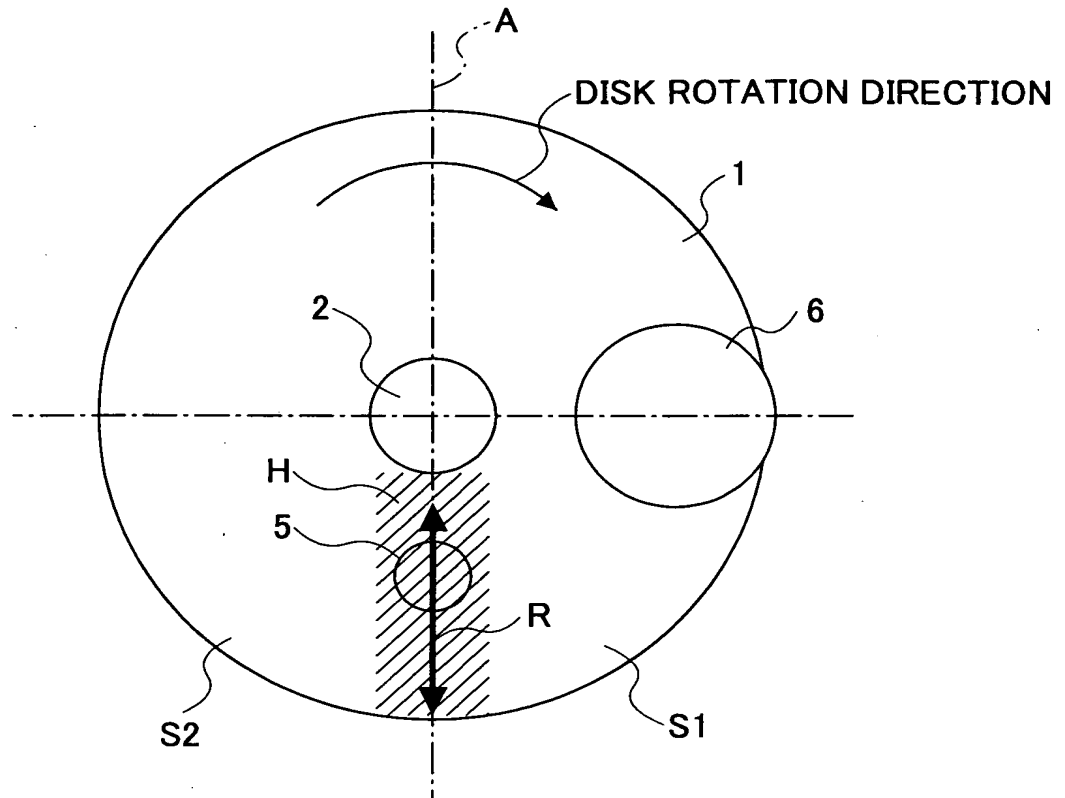


FIG.4

102

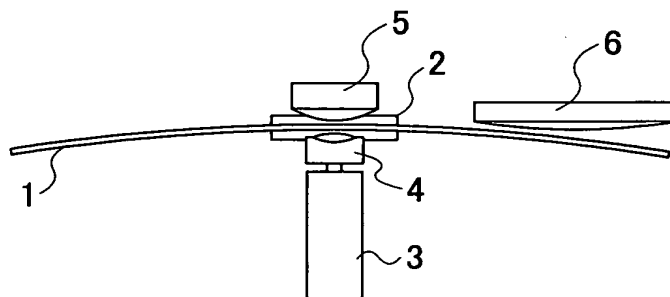


FIG.5

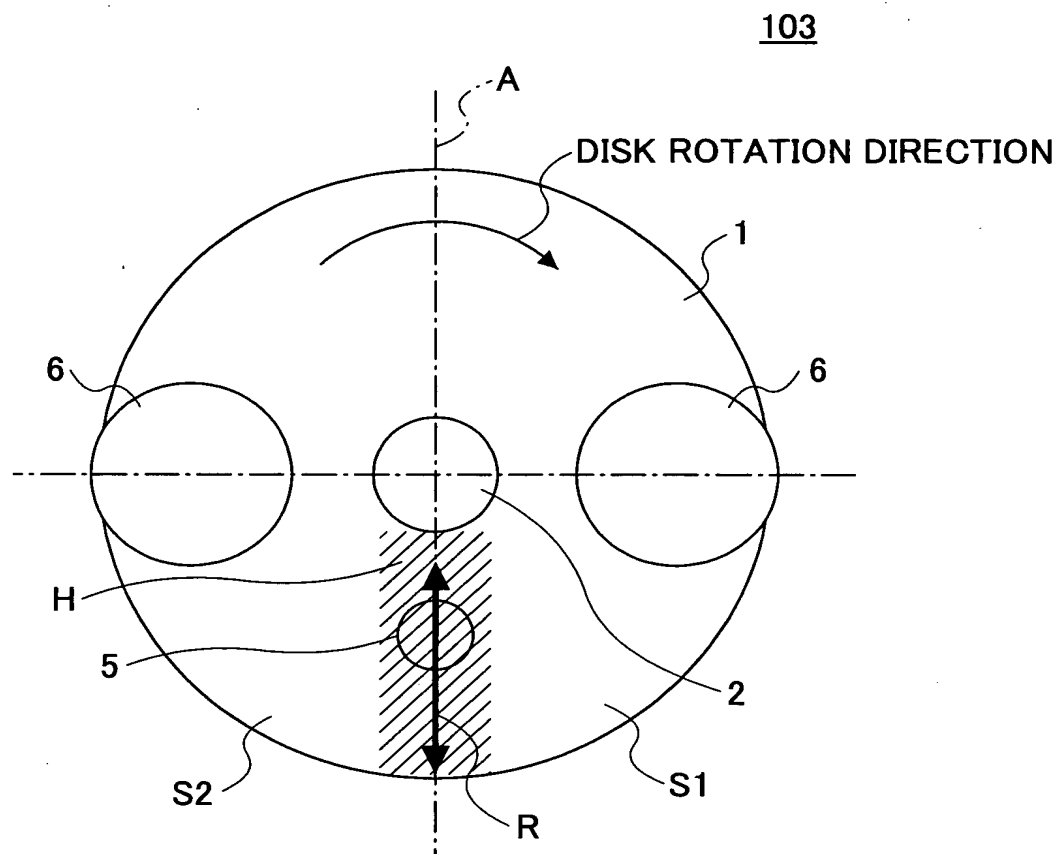


FIG.6

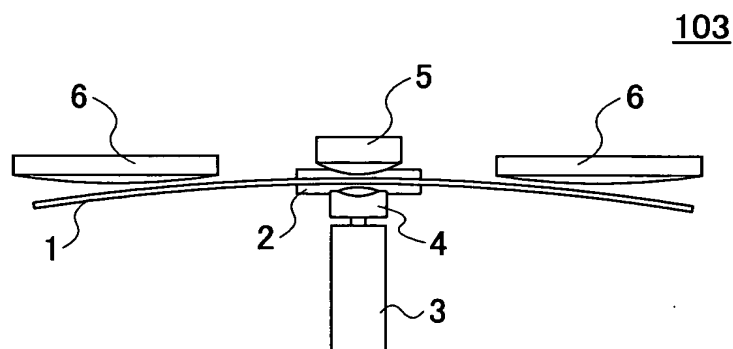


FIG.7

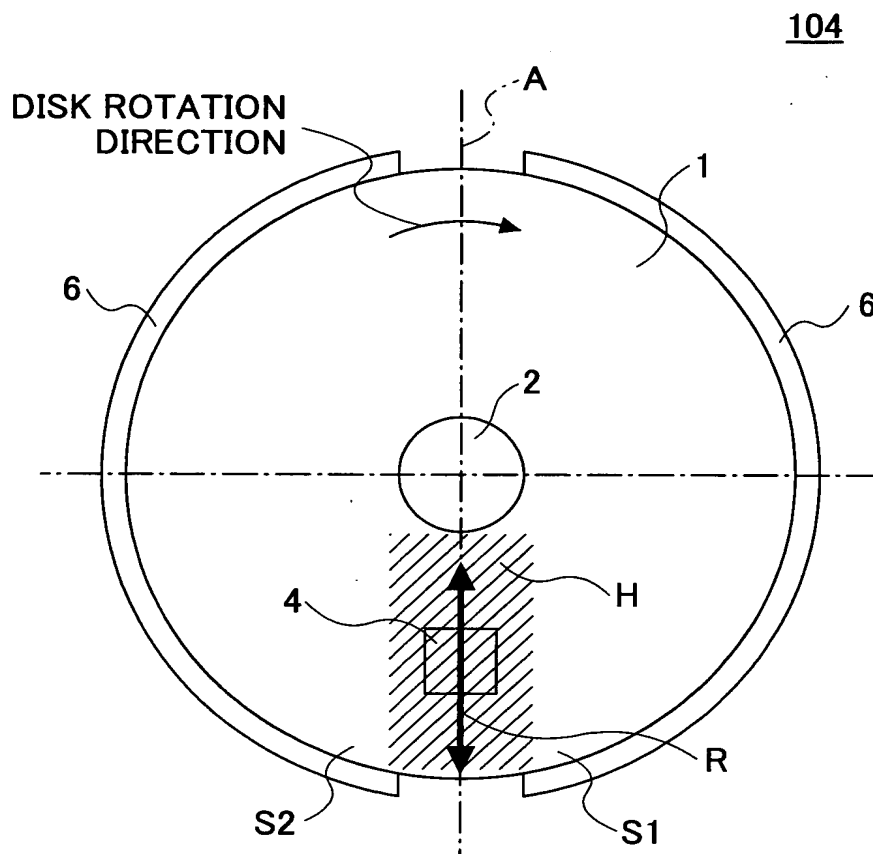
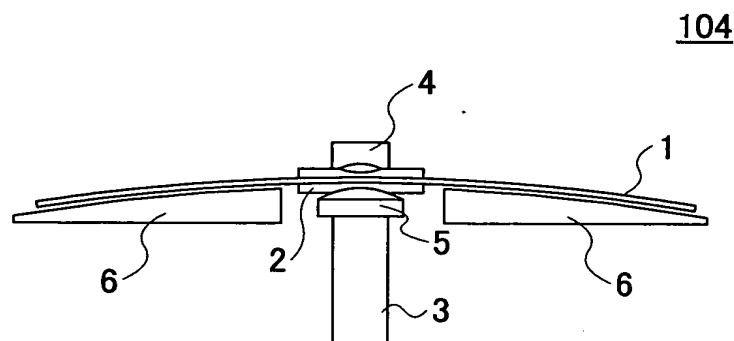


FIG.8



**FIG. 9**

103

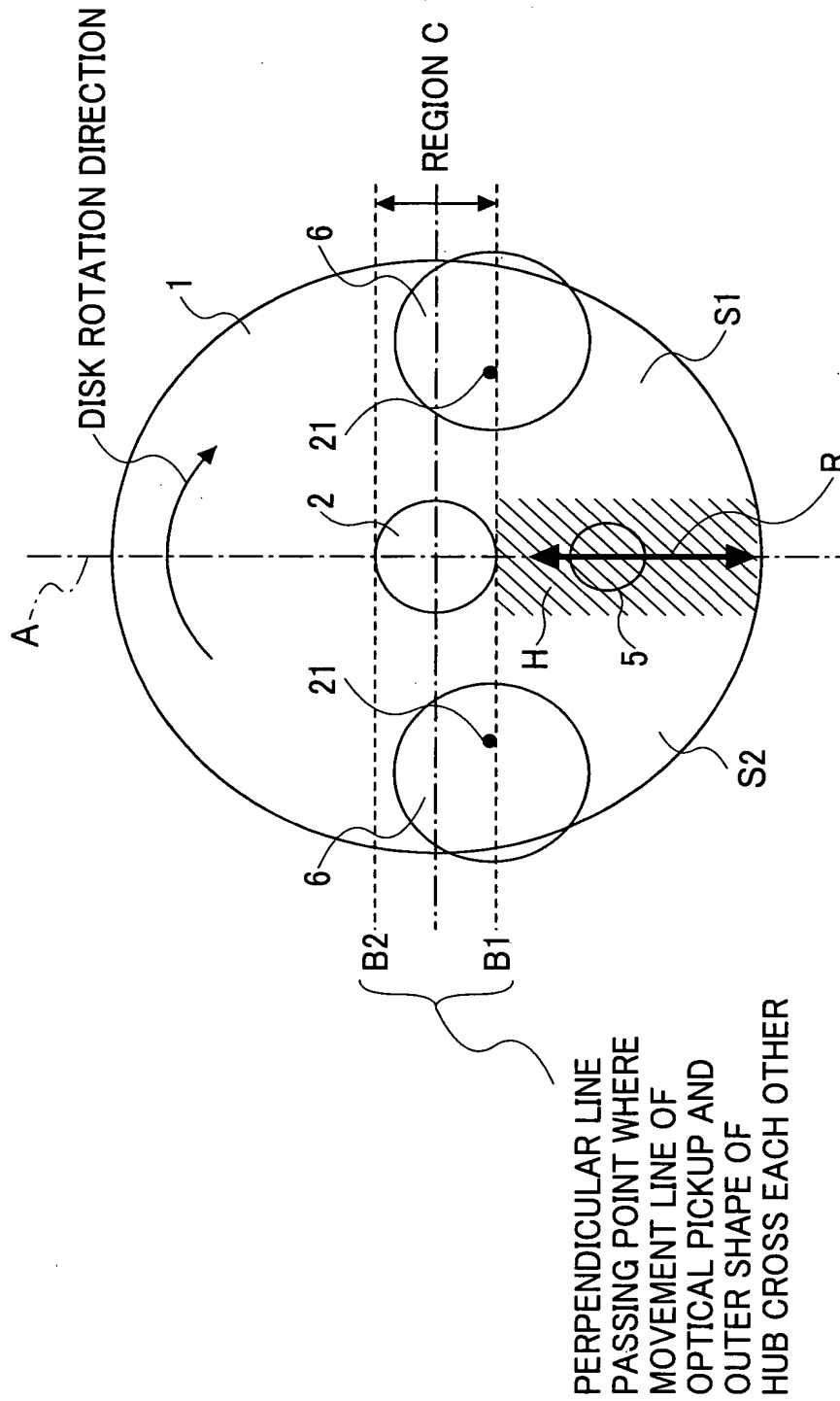


FIG.10

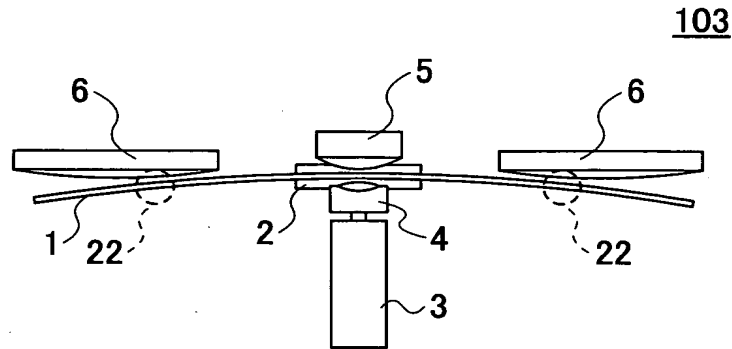


FIG.11

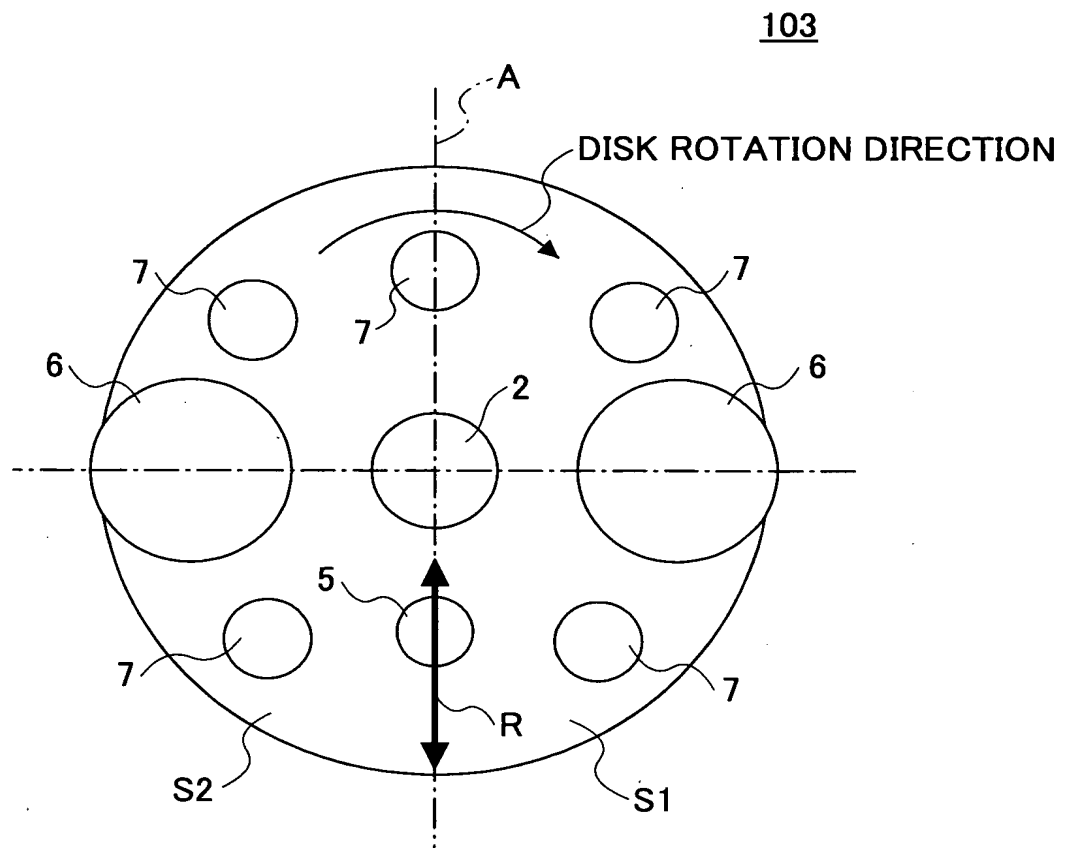


FIG.12

105

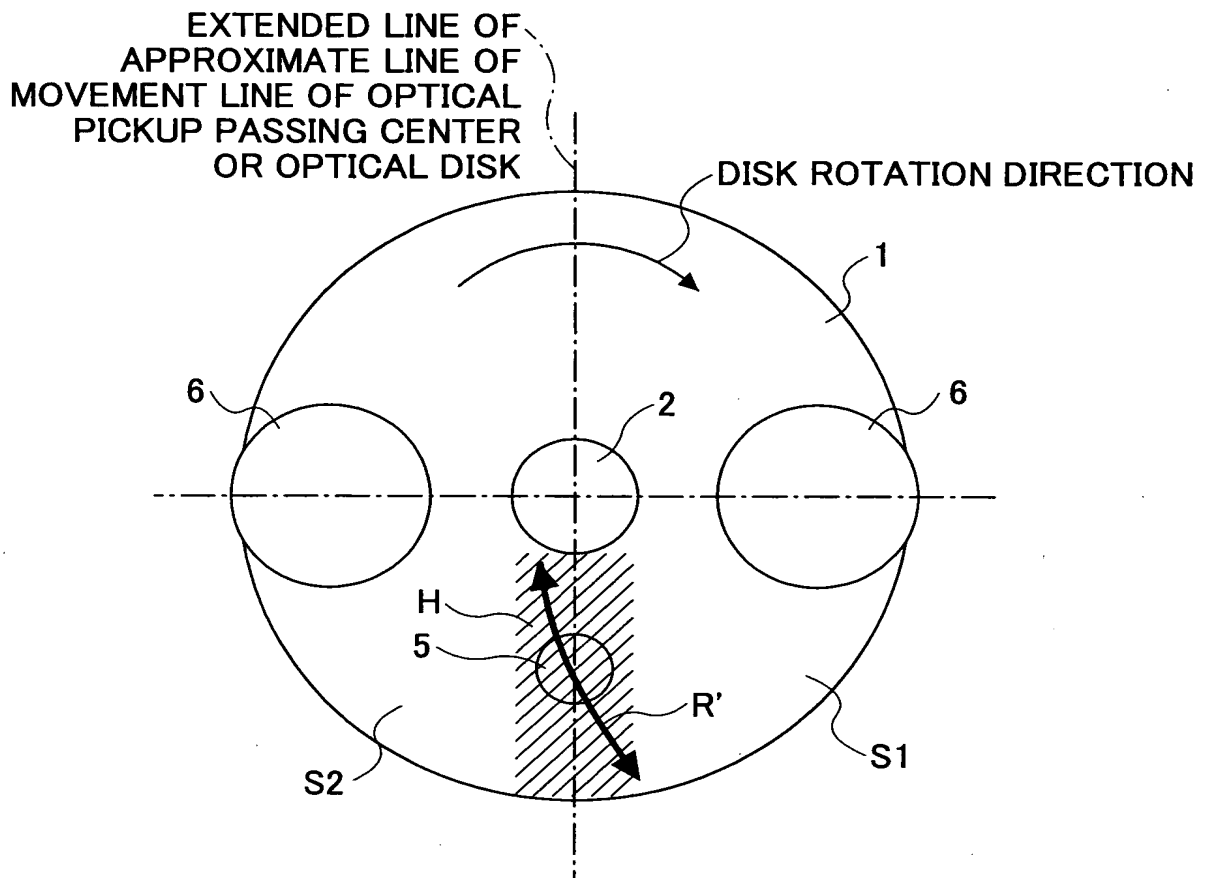


FIG.13

105

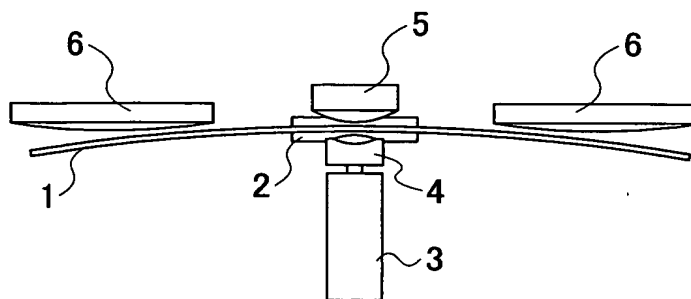




FIG.14

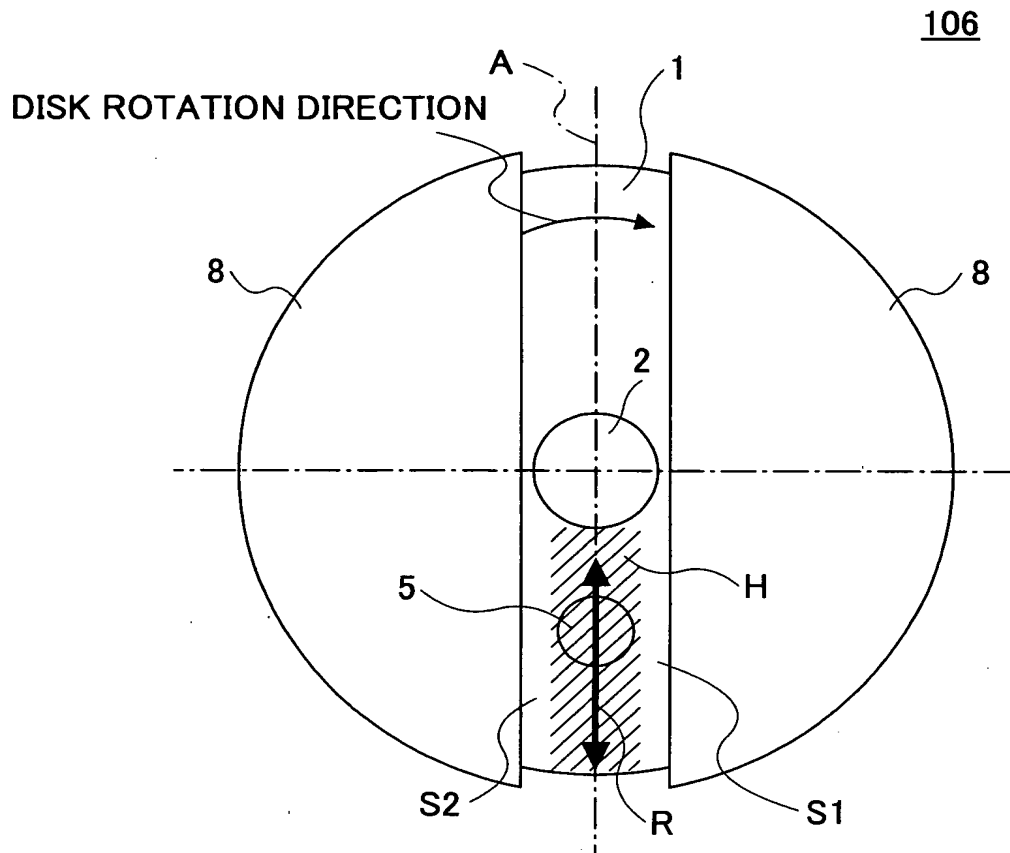


FIG.15

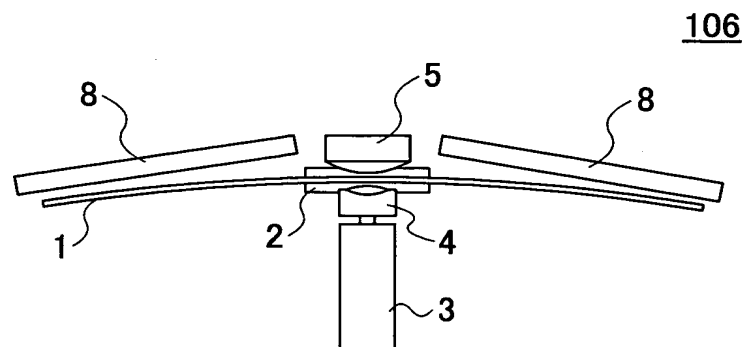


FIG.16

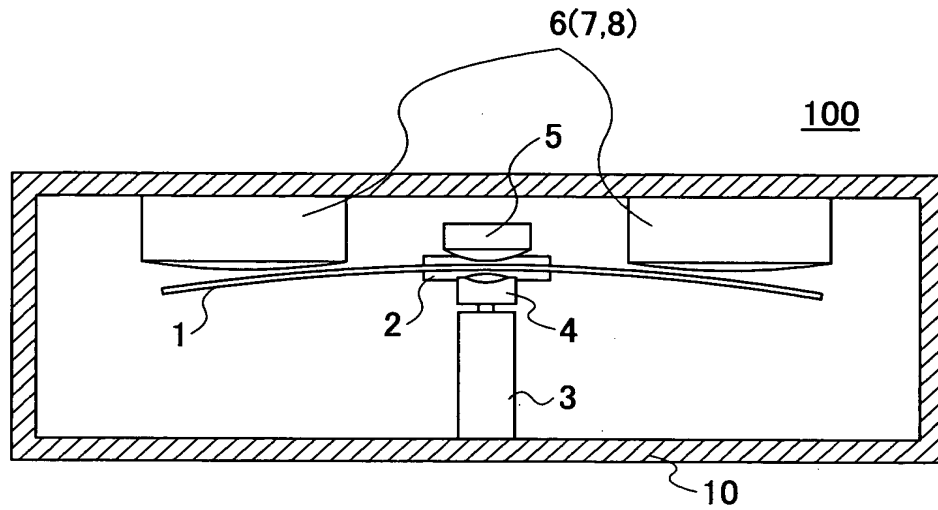


FIG.17

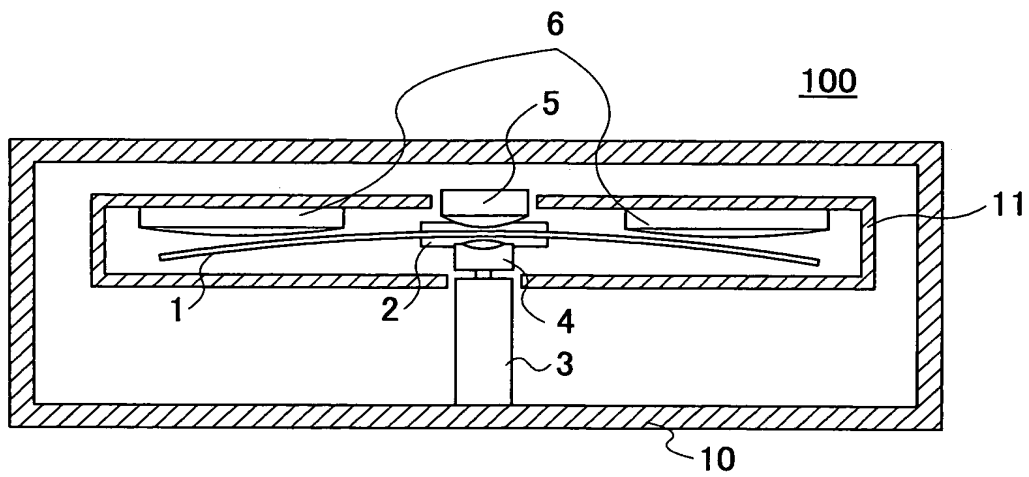


FIG.18

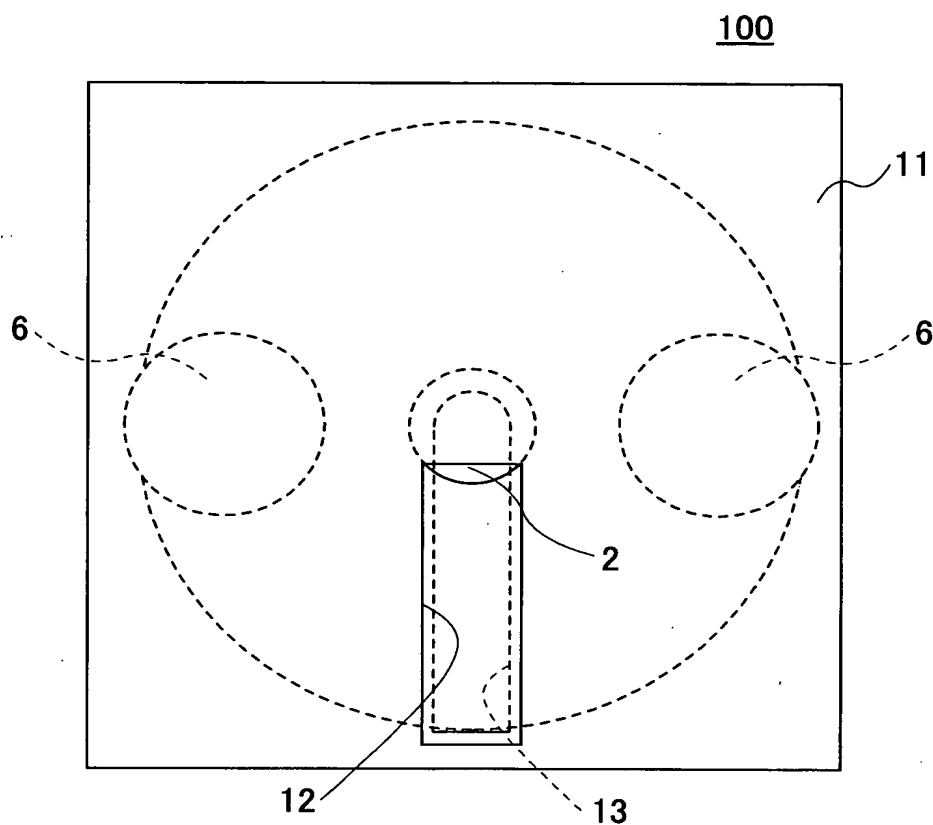


FIG.19

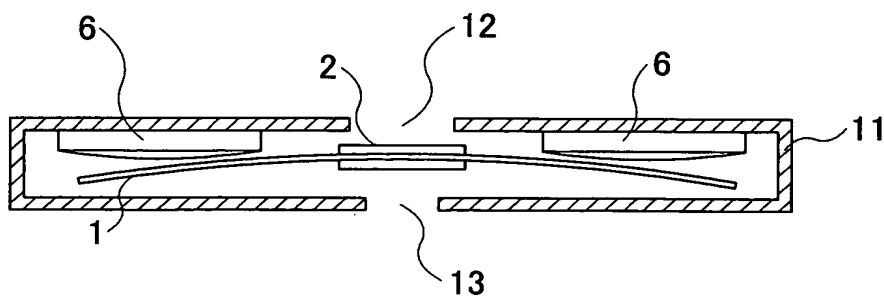


FIG.20

99

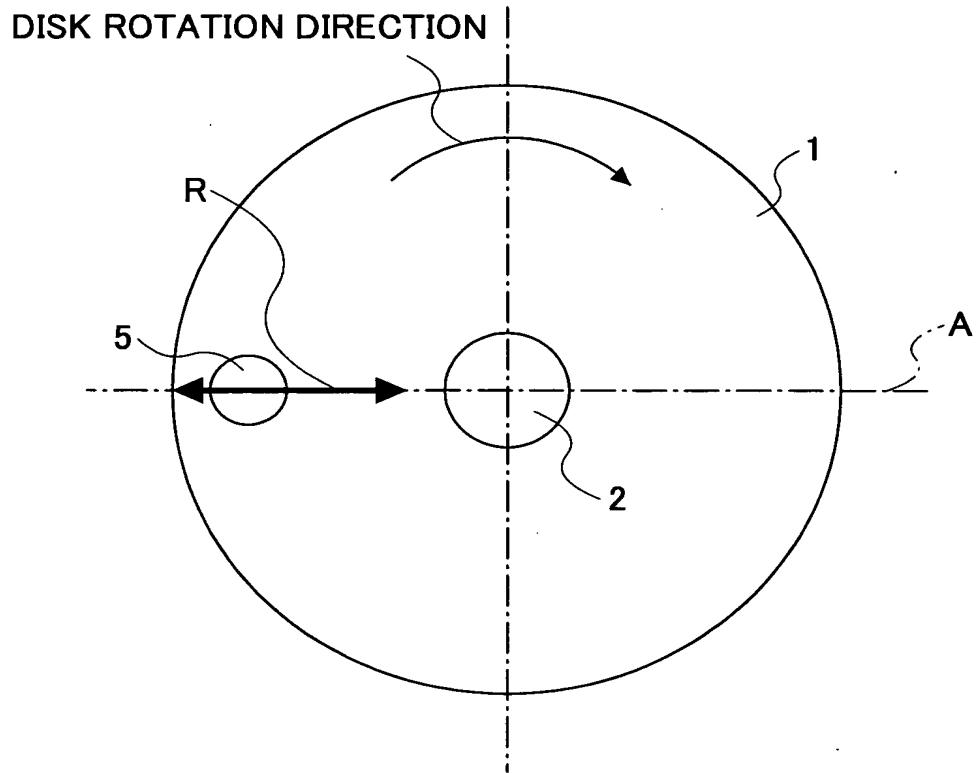
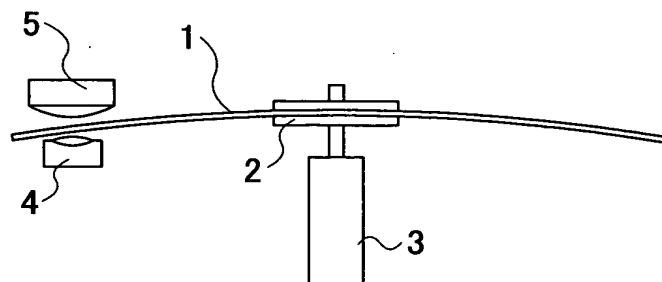


FIG.21

99



**FIG.22**

	LINEAR SPEED [m/sec]	REQUIRED PUSHING AMOUNT OF MAIN STABILIZING MEMBER TO REDUCE SIDE-RUNOUT LOWER THAN 10 MICRON (AT LOCATION OF r55mm)	SIDE-RUNOUT BY PUSHING AMOUNT [ $\mu$ m]
EXAMPLE 1-1	5	0.20	10.0
	15	0.15	10.0
	30	0.10	10.0
EXAMPLE 1-2	5	0.20	10.0
	15	0.15	10.0
	30	0.10	10.0
EXAMPLE 1-3	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 1-4	5	0.0	8.0
	15	0.0	8.0
	30	0.0	9.0
EXAMPLE 1-5	5	0.0	6.0
	15	0.0	6.0
	30	0.0	7.0
EXAMPLE 1-6	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 1-7	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
COMPARATIVE EXAMPLE 1-1	5	2.6	10.0
	15	2.3	10.0
	30	2.0	10.0

## FIG.23

	SIDE-RUNOUT WHEN ADJUSTMENTS OF PUSHING AMOUNT AND TILT ANGLE OF MAIN STABILIZING MEMBER ARE OPTIMIZED [ $\mu$ m]
EXAMPLE 1-1	4.0
EXAMPLE 1-2	4.0
EXAMPLE 1-3	3.0
EXAMPLE 1-4	3.0
EXAMPLE 1-5	3.0
EXAMPLE 1-6	3.0
EXAMPLE 1-7	3.0
COMPARATIVE EXAMPLE 1-1	5.0

FIG.24

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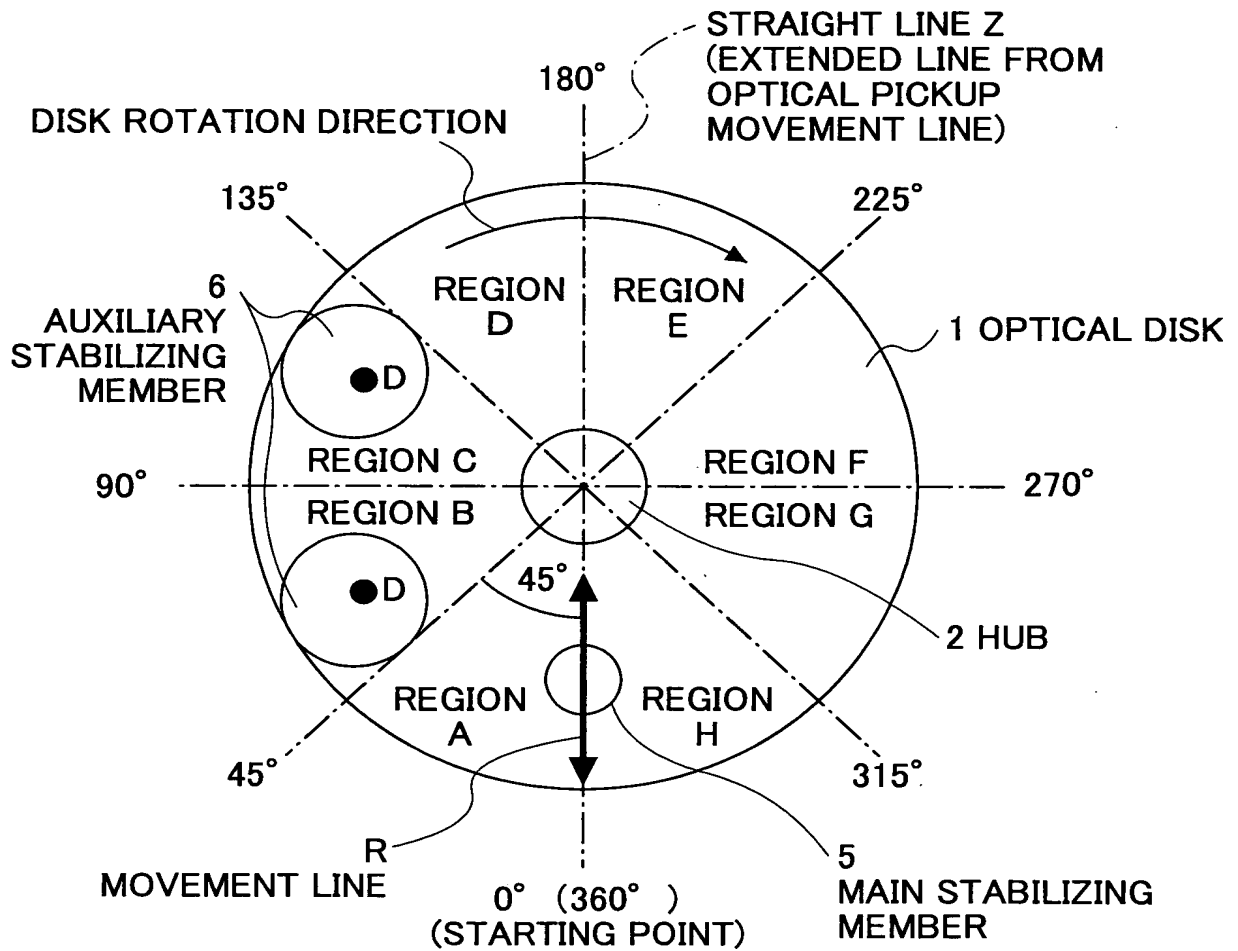


FIG.25

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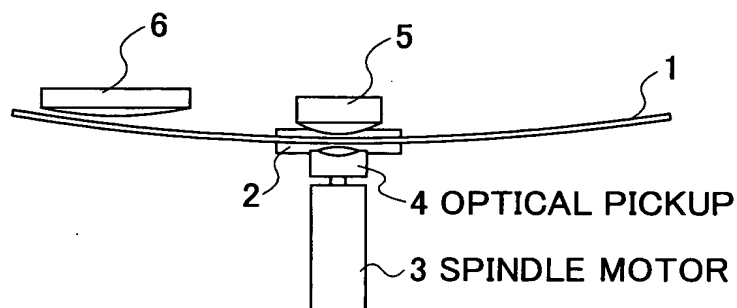


FIG.26

109

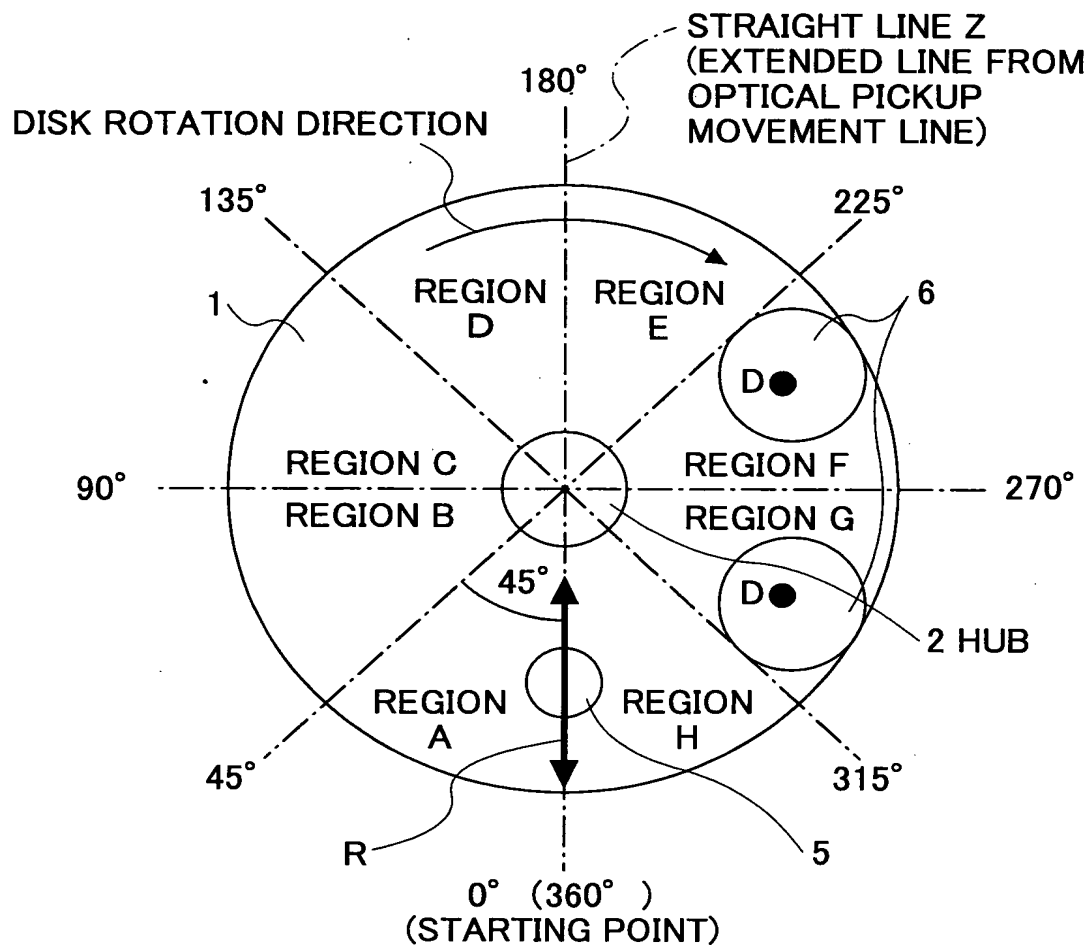


FIG.27

109

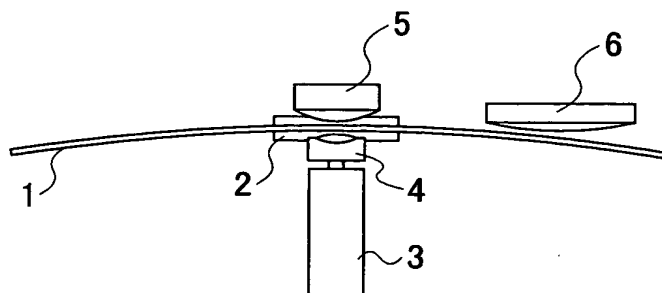




FIG.28

110

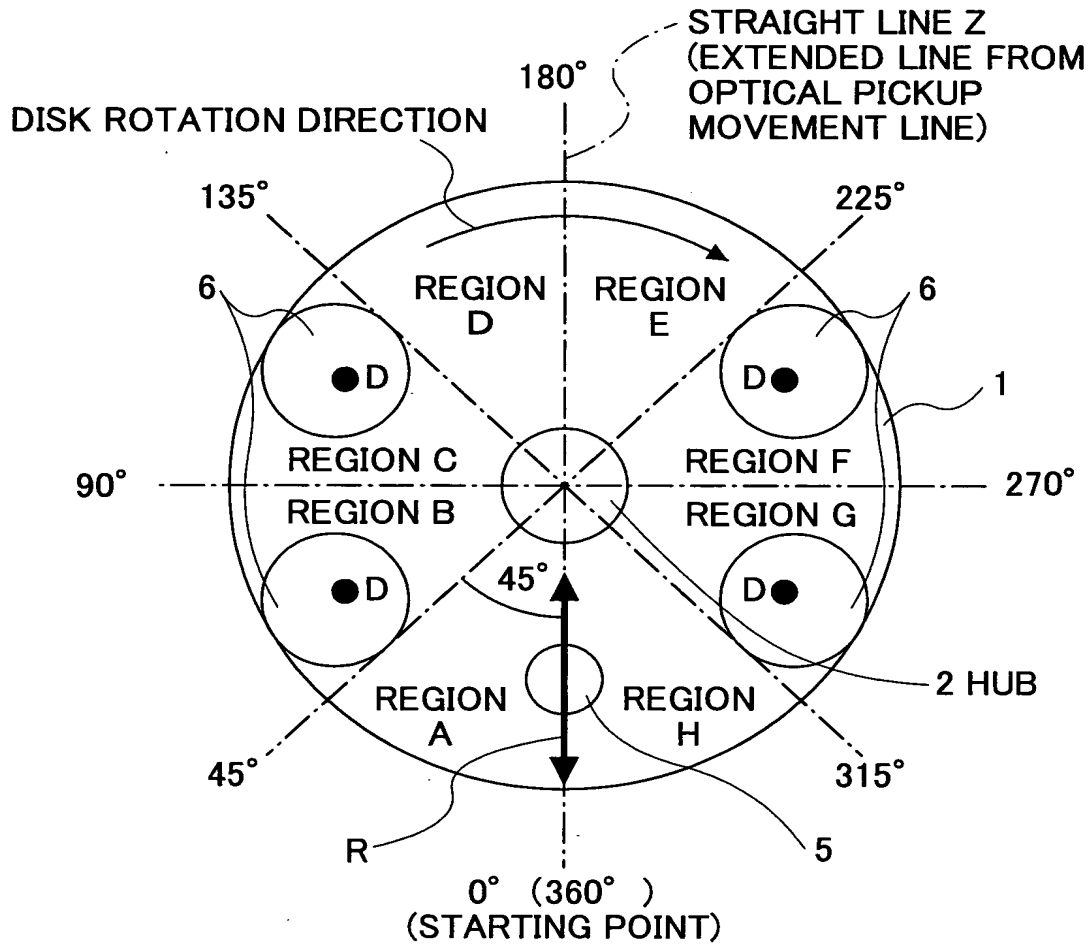
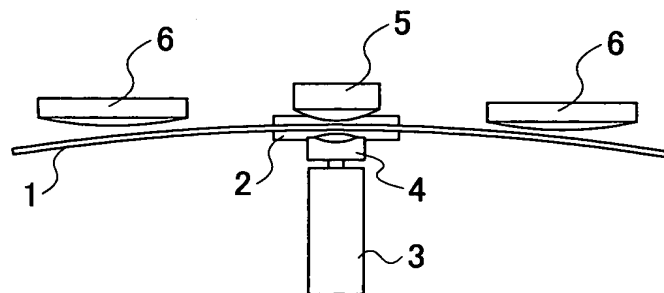


FIG.29

110



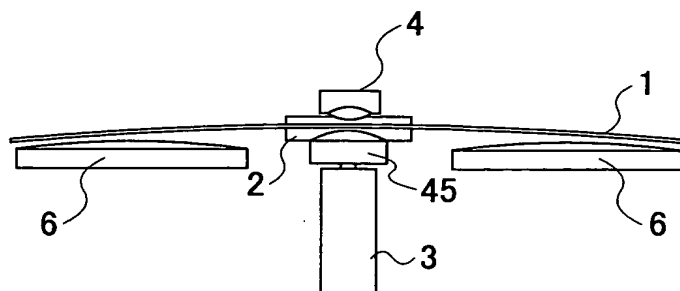
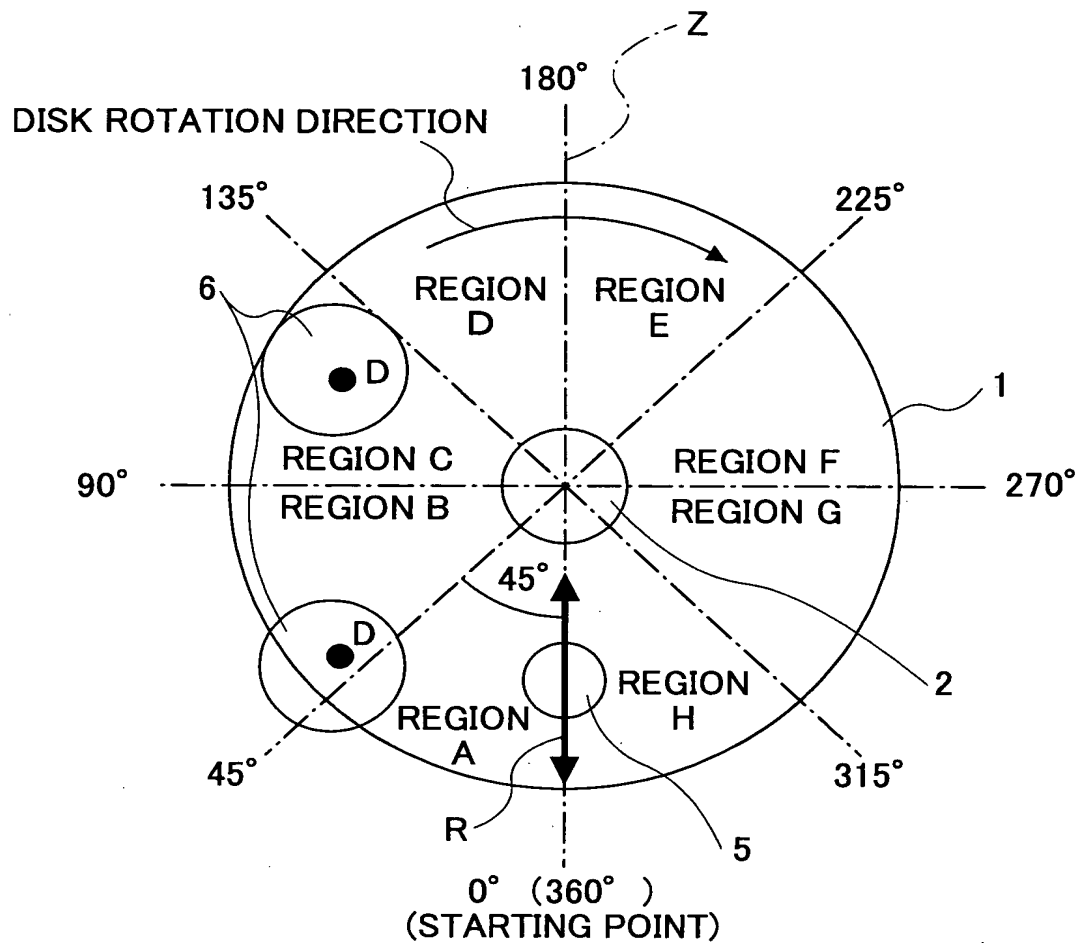


FIG.32



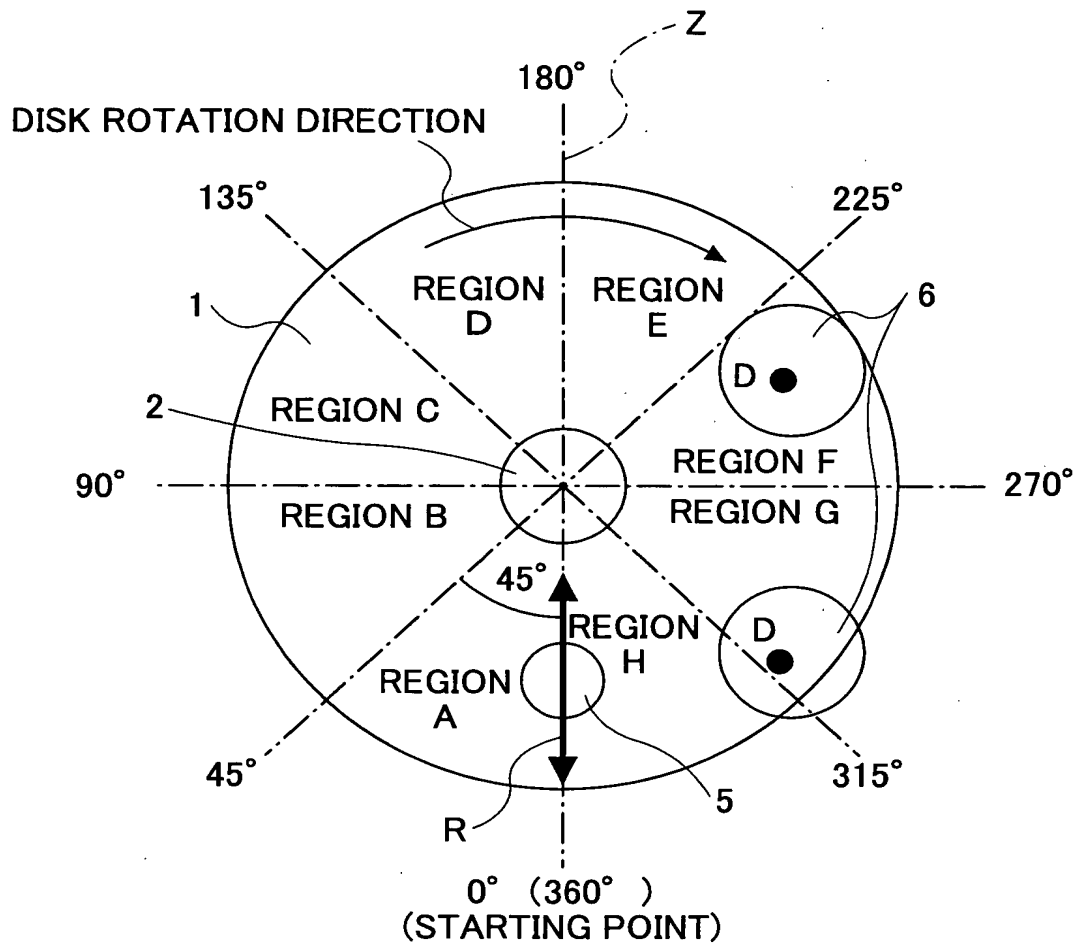
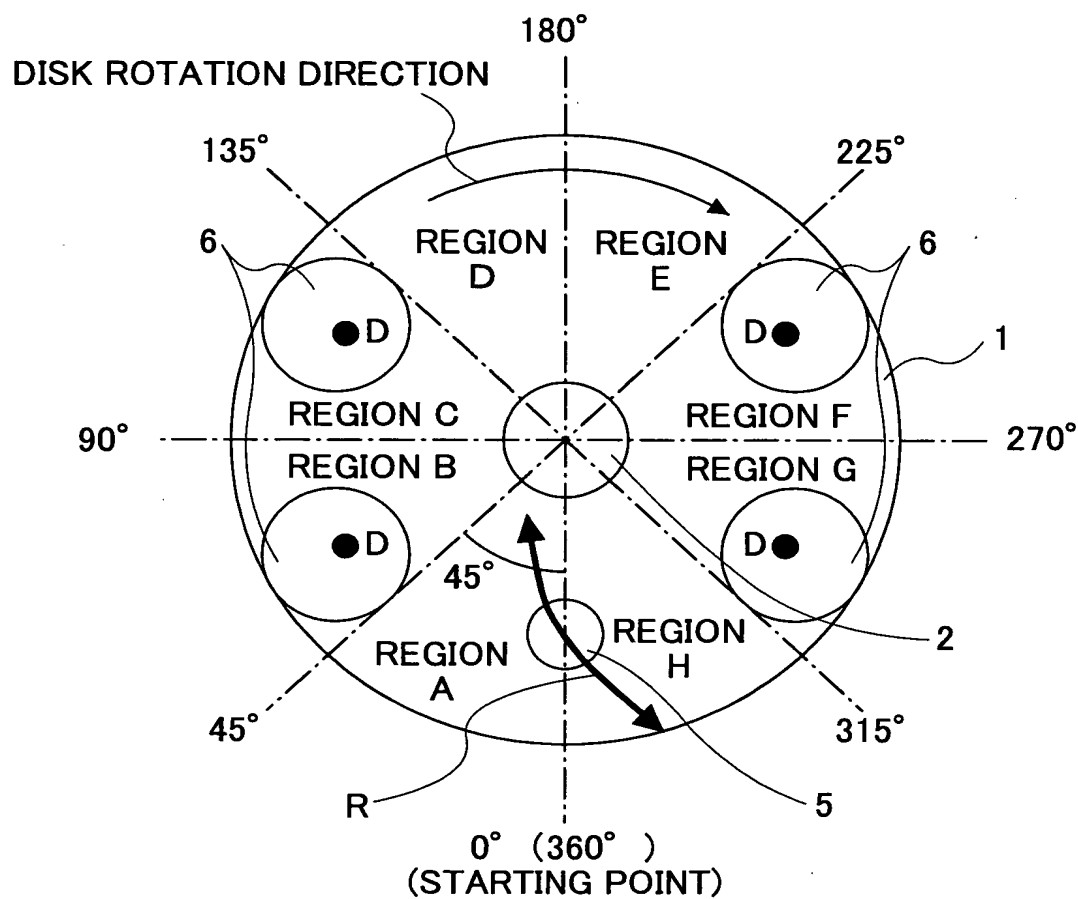
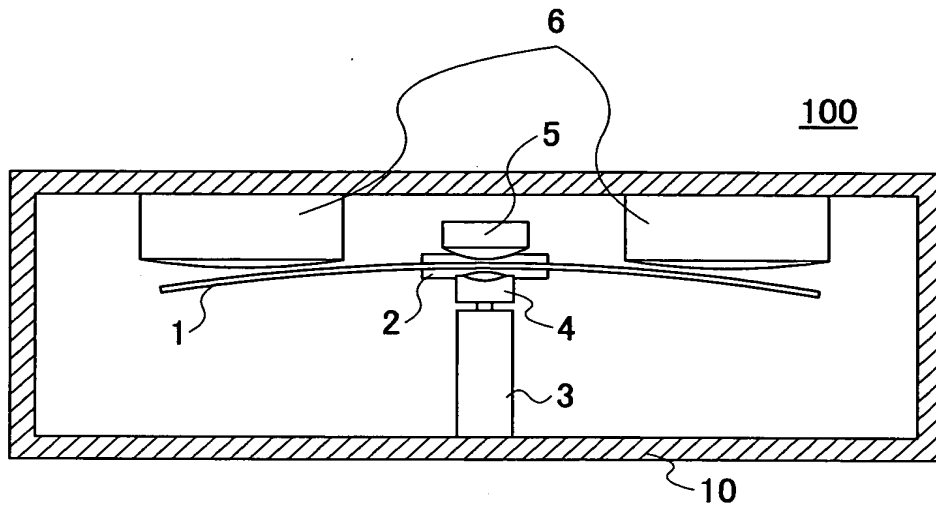


FIG.34

110



**FIG.35**



**FIG.36**

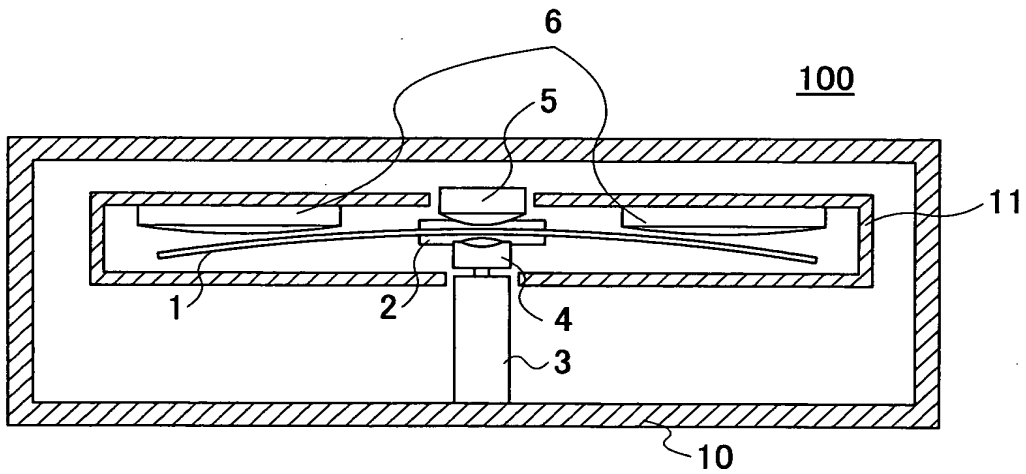


FIG.37

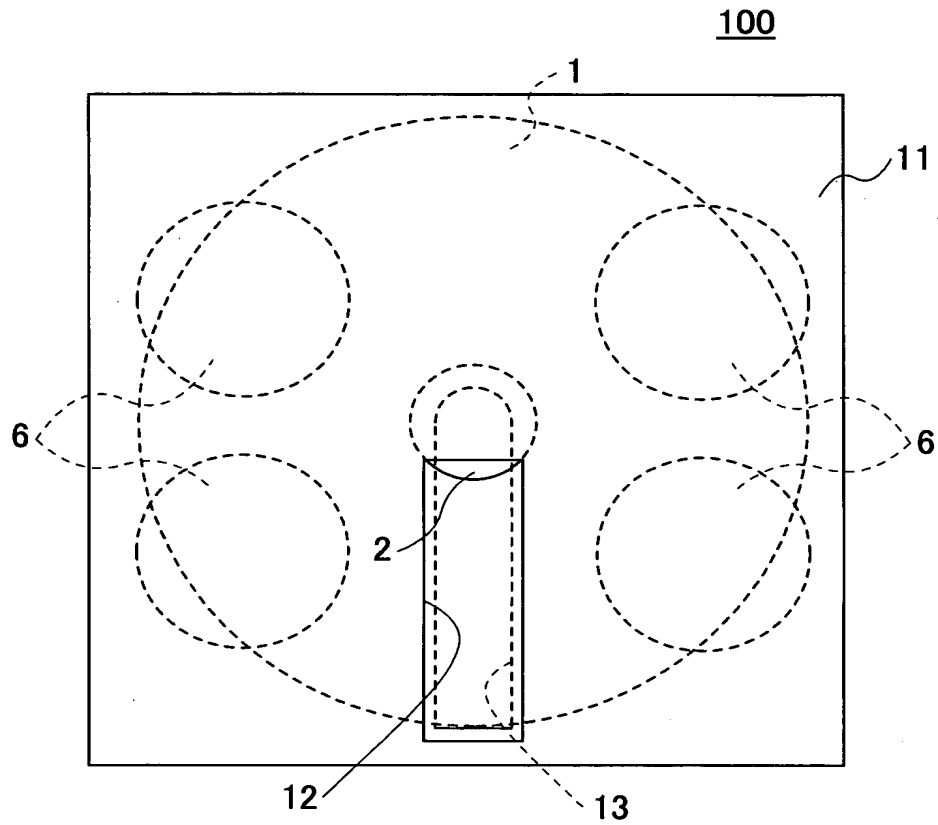


FIG.38

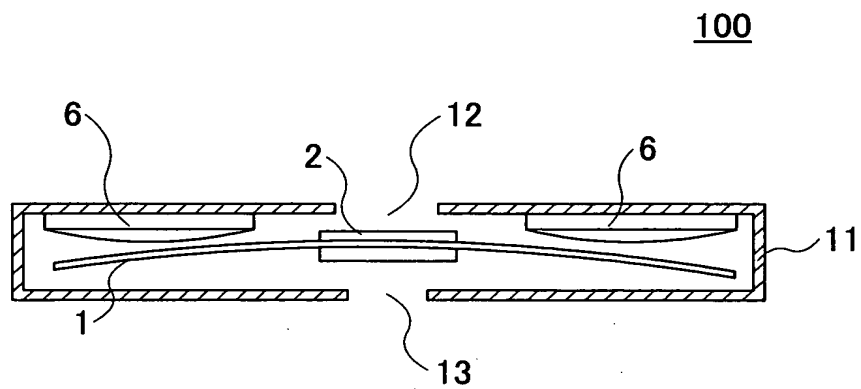


FIG.39

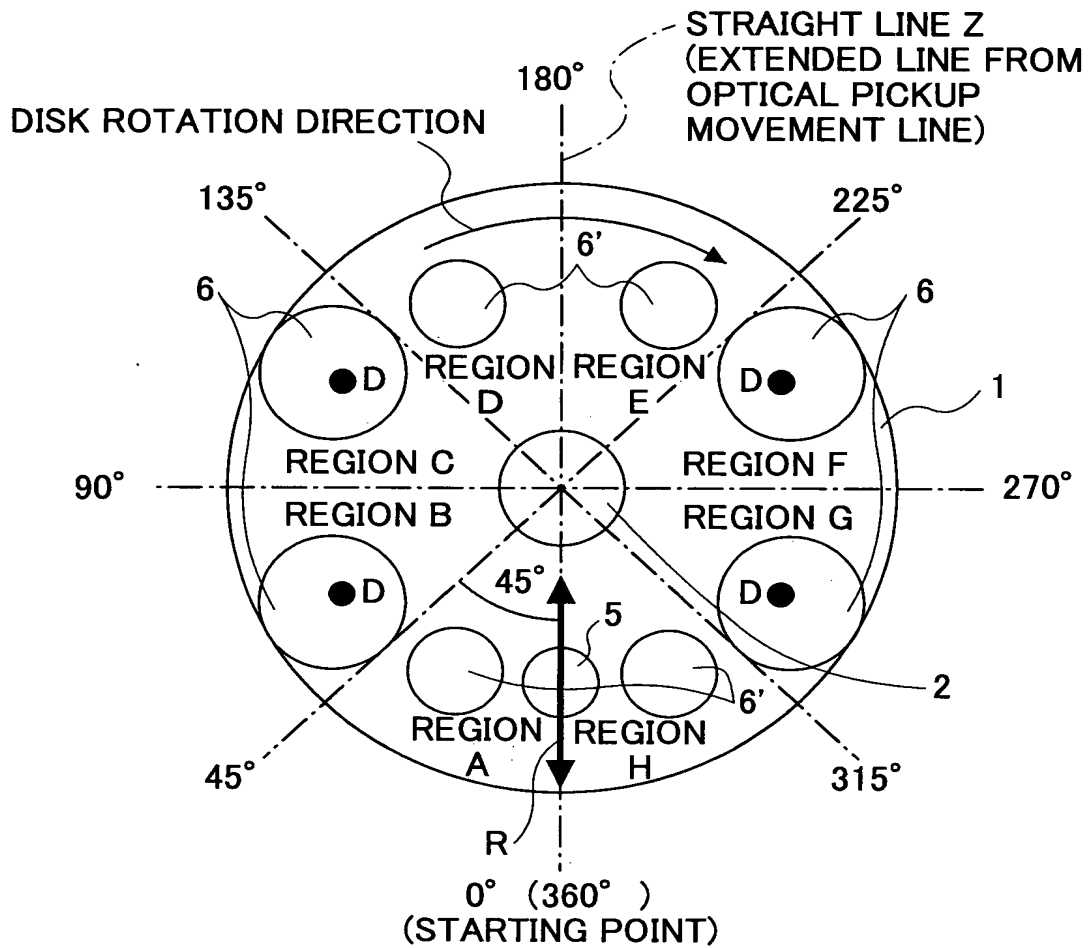




FIG.40

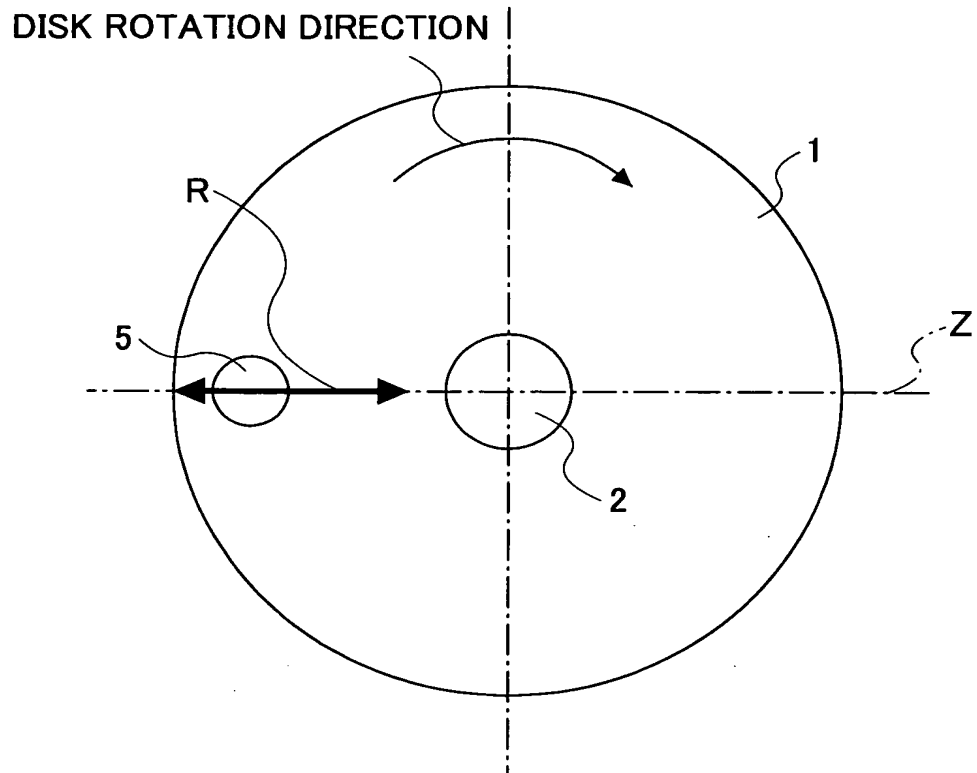
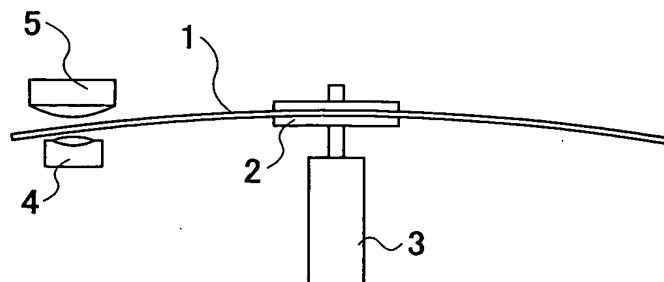


FIG.41



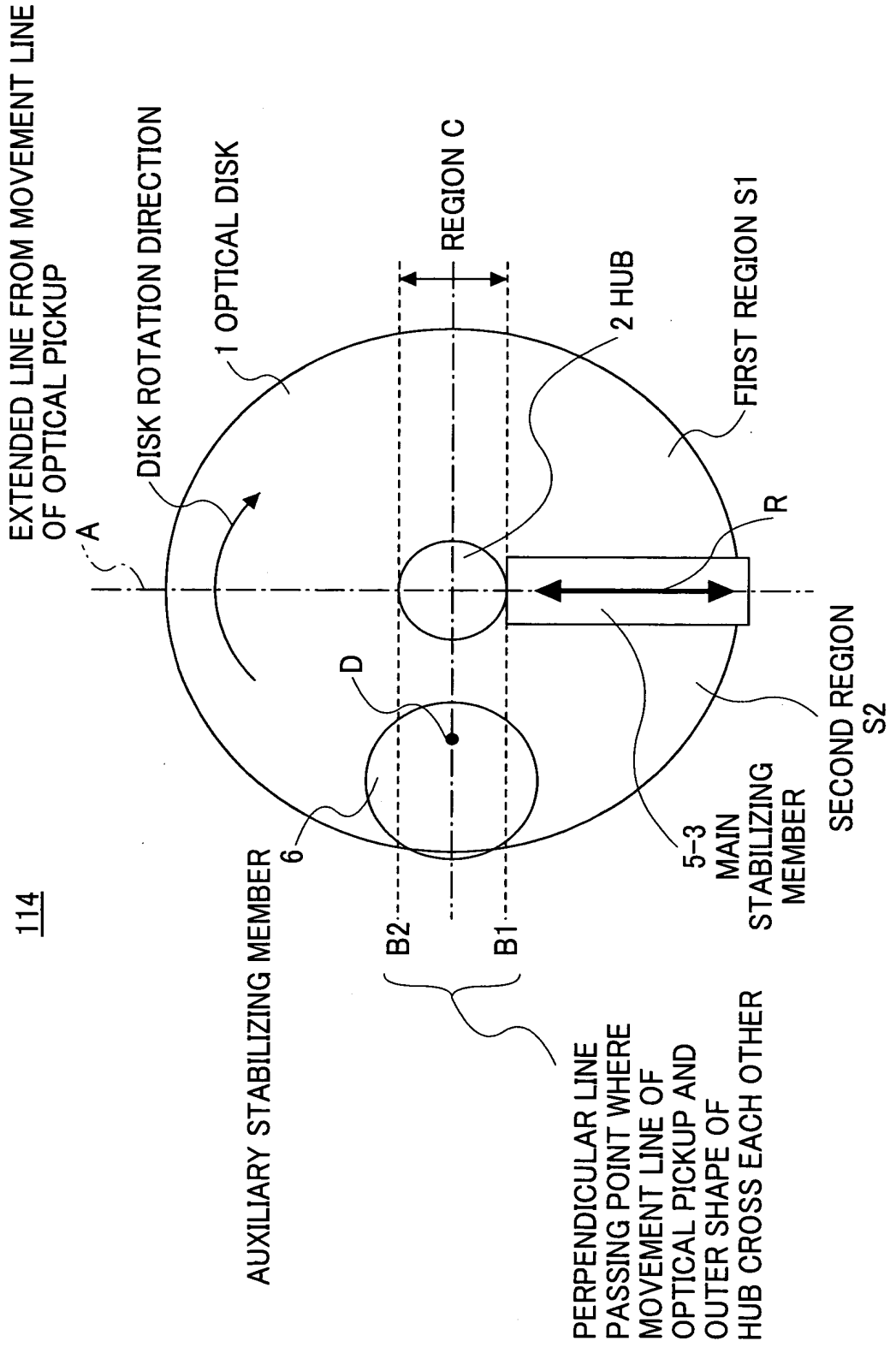
**FIG.42**

	LINEAR SPEED [m/sec]	REQUIRED PUSHING AMOUNT OF MAIN STABILIZING MEMBER TO REDUCE SIDE-RUNOUT LOWER THAN 10 MICRON (AT LOCATION OF r55mm)	SIDE-RUNOUT BY PUSHING AMOUNT [micron]
EXAMPLE 2-1	5	0.15	10.0
	15	0.10	10.0
	30	0.05	10.0
EXAMPLE 2-2	5	0.15	10.0
	15	0.10	10.0
	30	0.05	10.0
EXAMPLE 2-3	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 2-4	5	0.0	8.0
	15	0.0	8.0
	30	0.0	9.0
EXAMPLE 2-5	5	0.0	6.0
	15	0.0	6.0
	30	0.0	7.0
EXAMPLE 2-6	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
COMPARATIVE EXAMPLE 2-1	5	2.6	10.0
	15	2.3	10.0
	30	2.0	10.0

## FIG.43

	SIDE-RUNOUT WHEN ADJUSTMENTS OF PUSHING AMOUNT AND TILT ANGLE OF MAIN STABILIZING MEMBER ARE OPTIMIZED [micron]
EXAMPLE 2-1	4.0
EXAMPLE 2-2	4.0
EXAMPLE 2-3	3.0
EXAMPLE 2-4	3.0
EXAMPLE 2-5	3.0
EXAMPLE 2-6	3.0
COMPARATIVE EXAMPLE 2-1	5.0

FIG.44



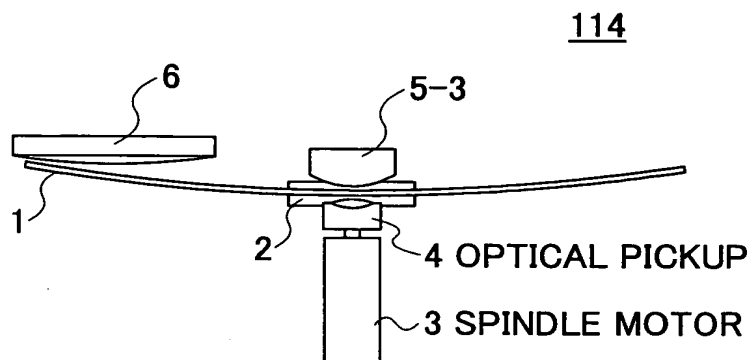
**FIG.45**

FIG.46

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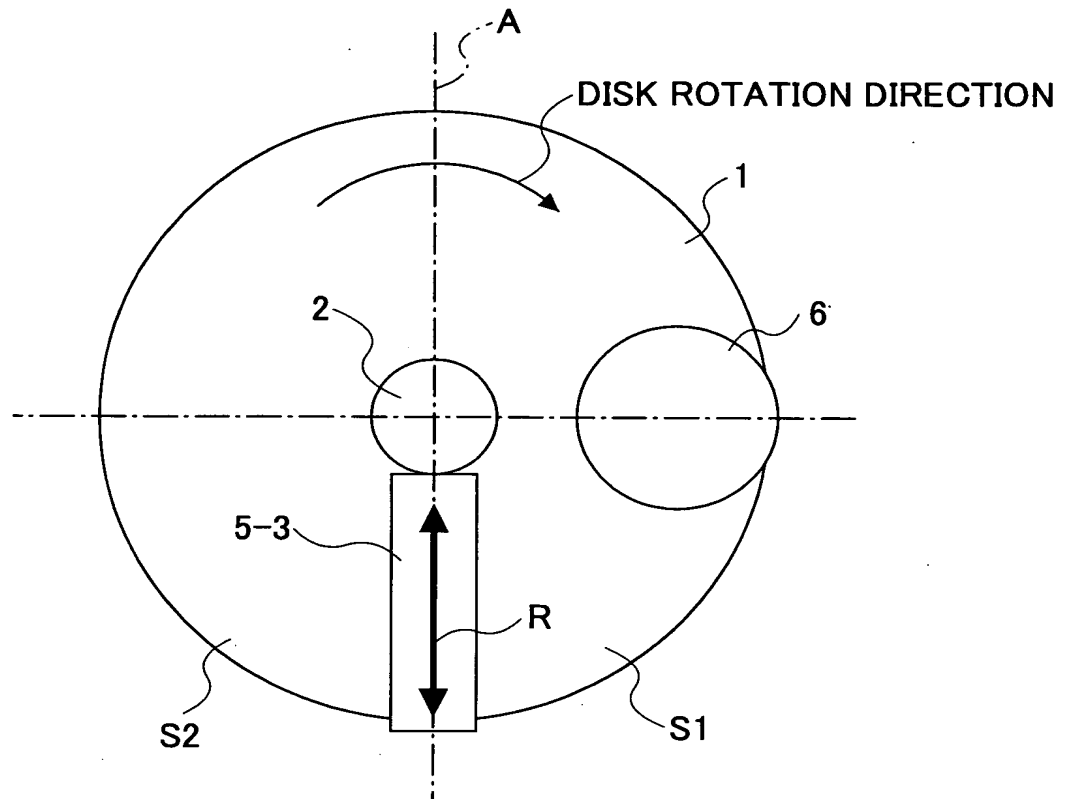


FIG.47

115

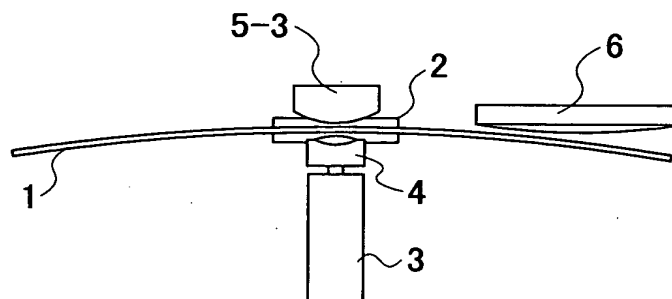


FIG.48

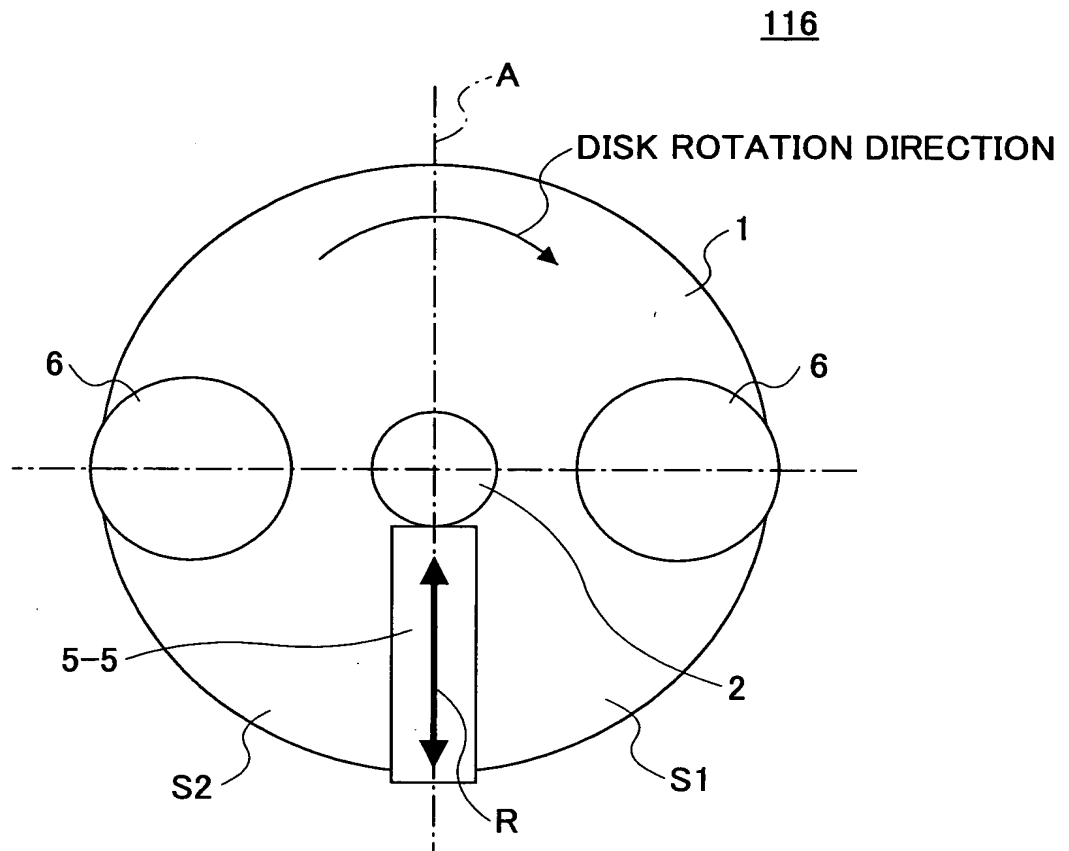
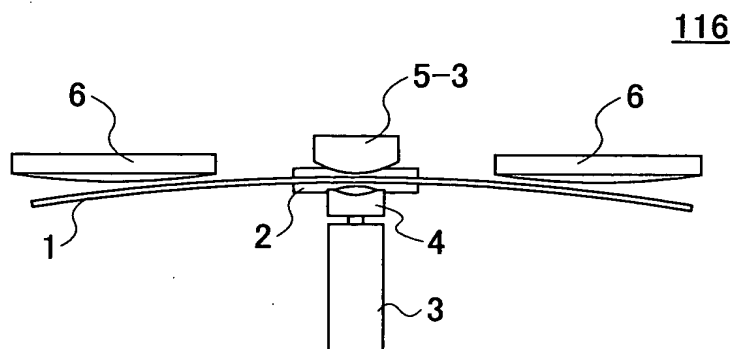


FIG.49



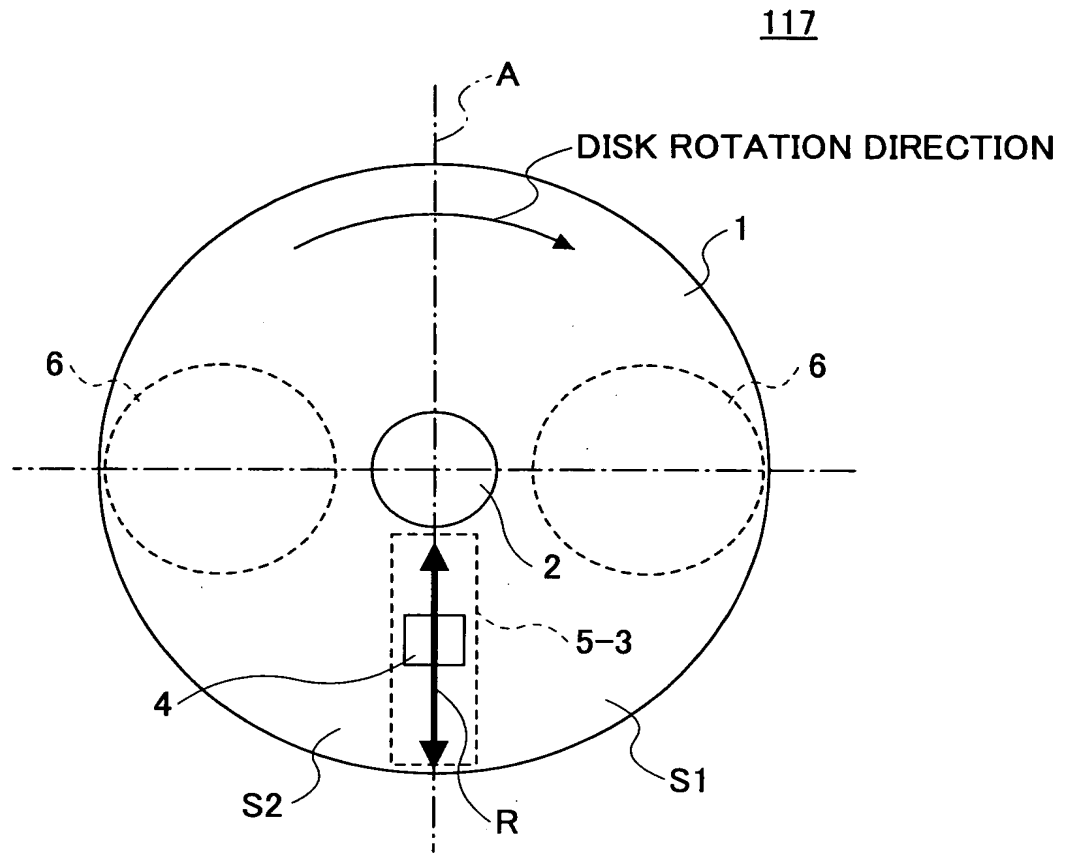
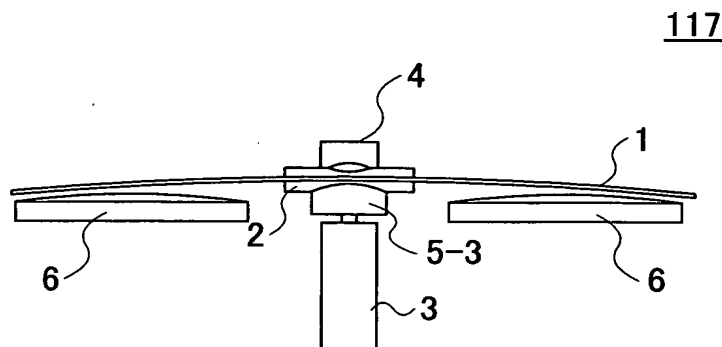
**FIG.50****FIG.51**



FIG.52

116

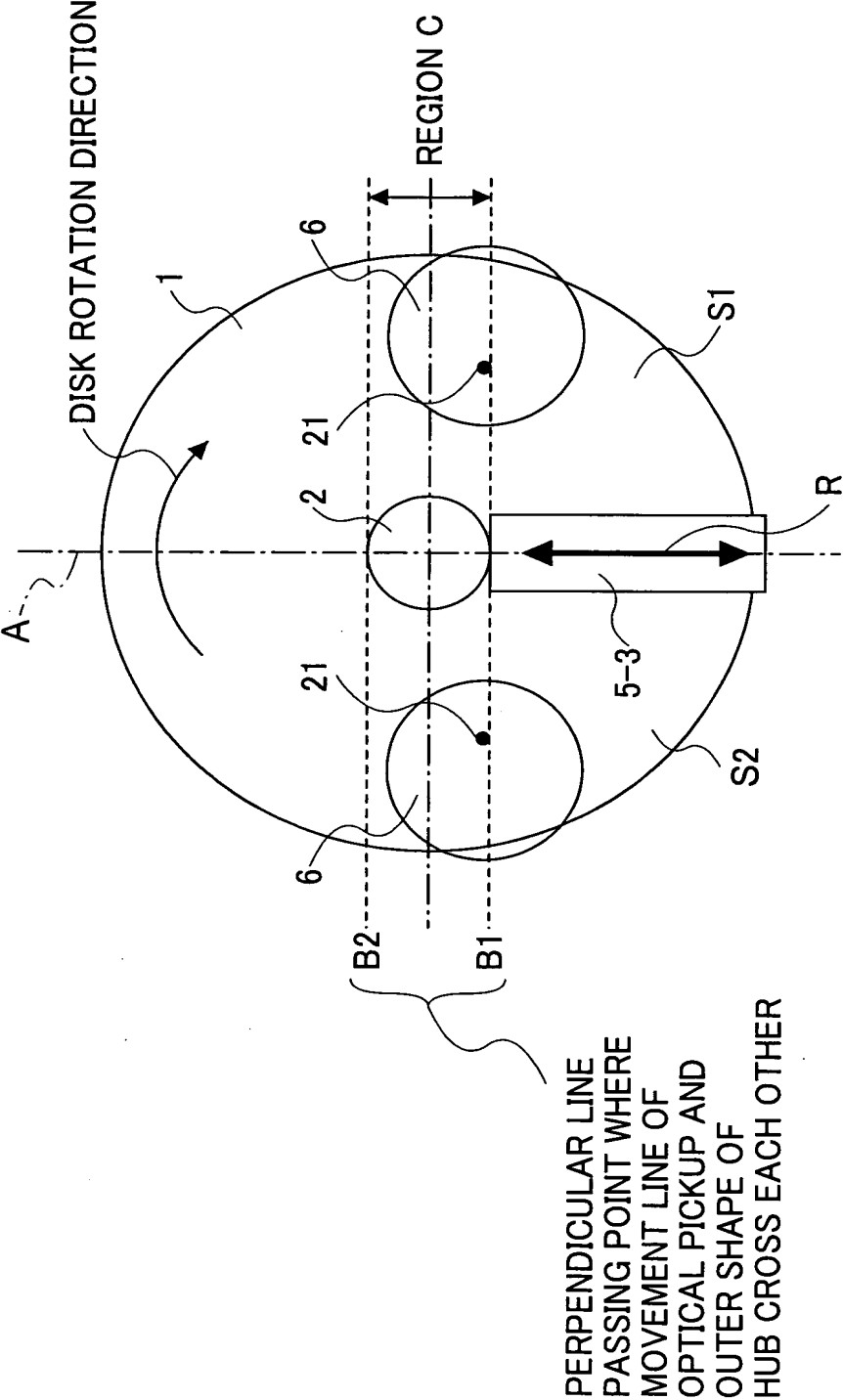


FIG.53

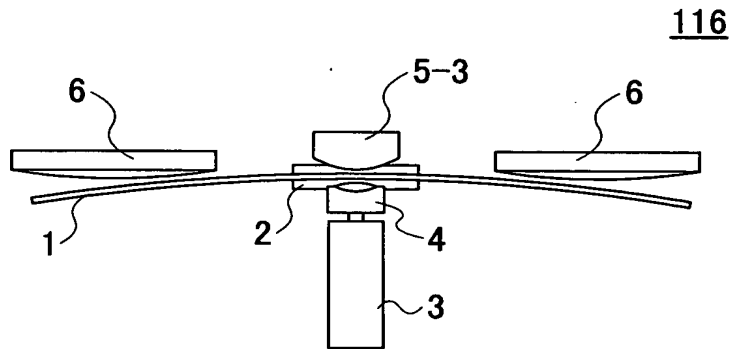


FIG.54

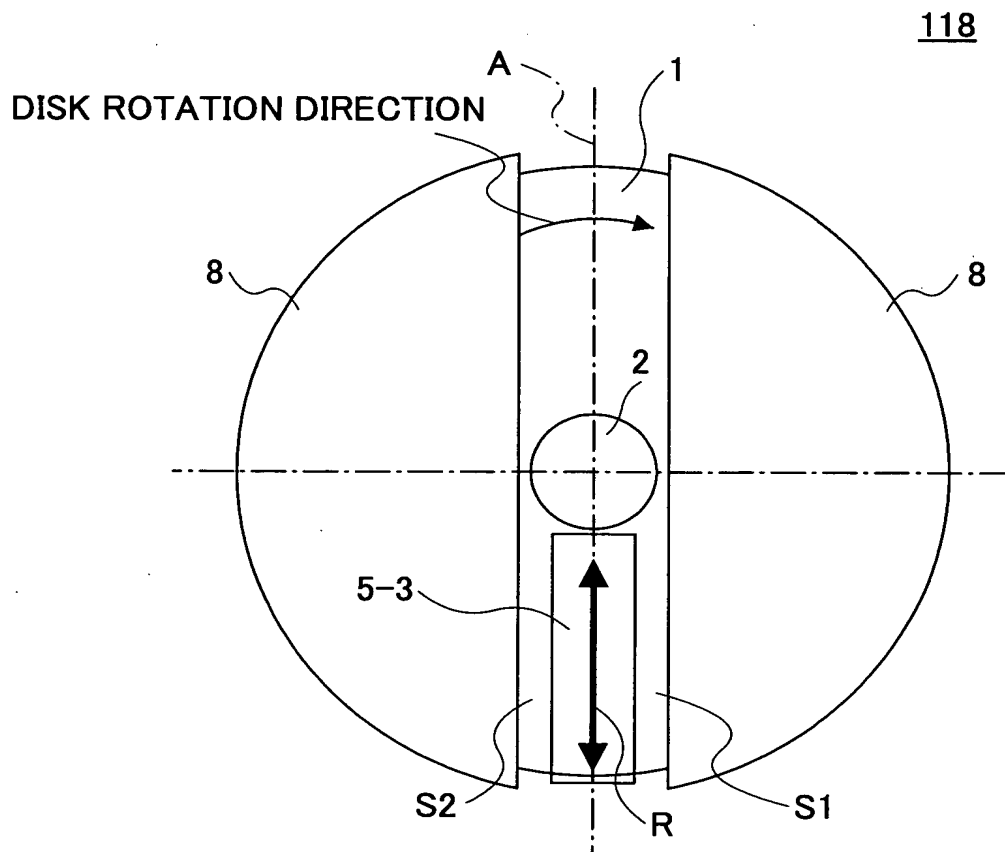


FIG.55

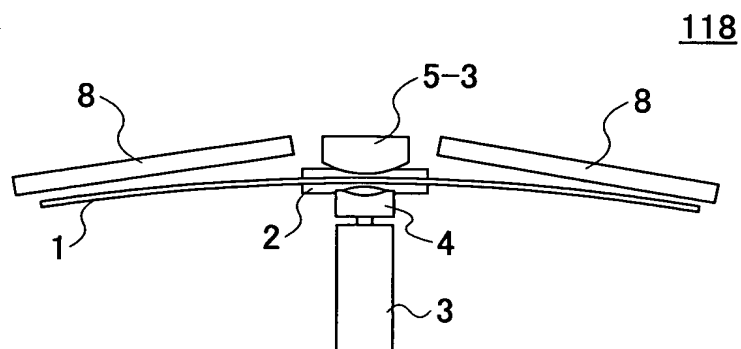


FIG.56

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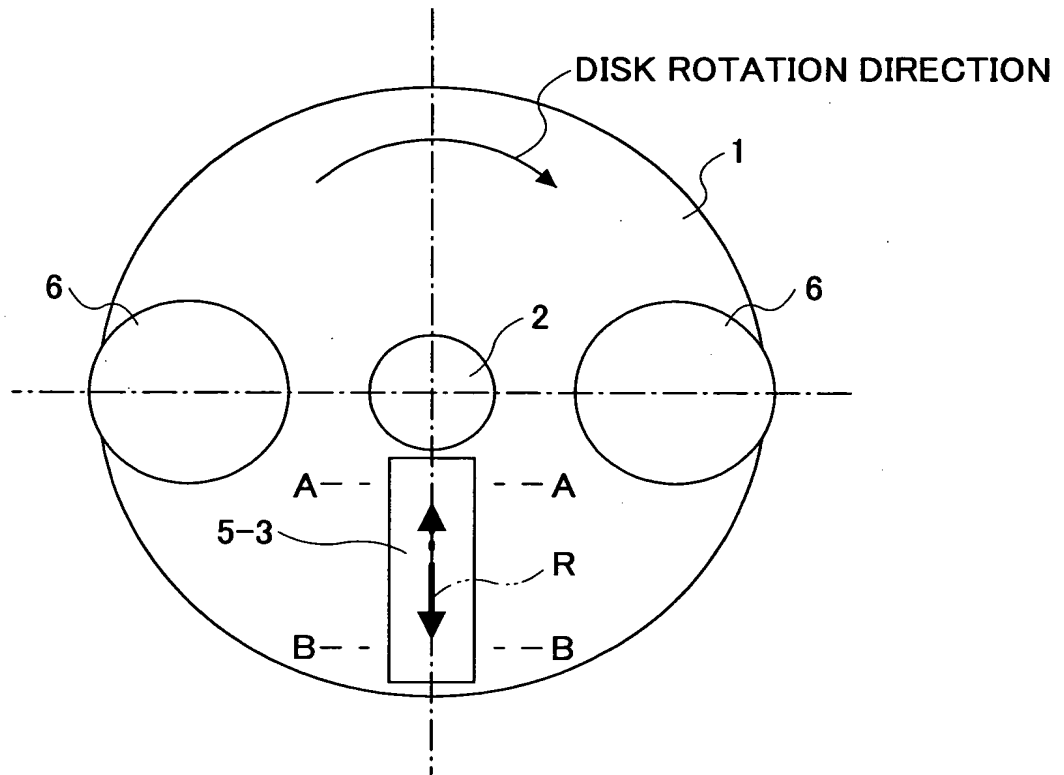


FIG.57A

FIG.57B

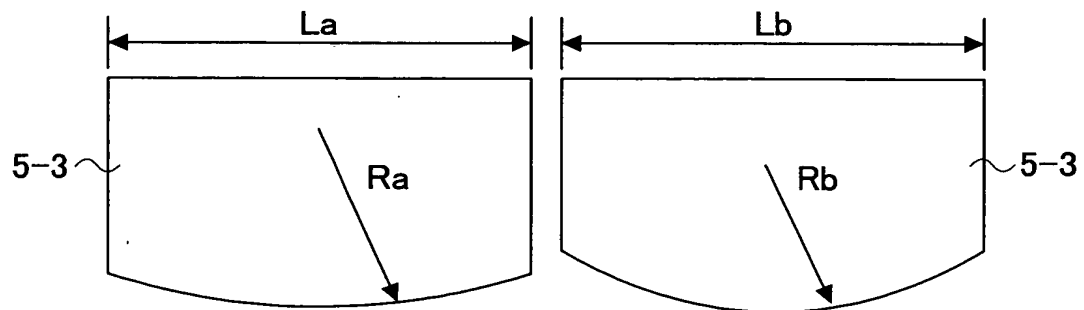


FIG.58

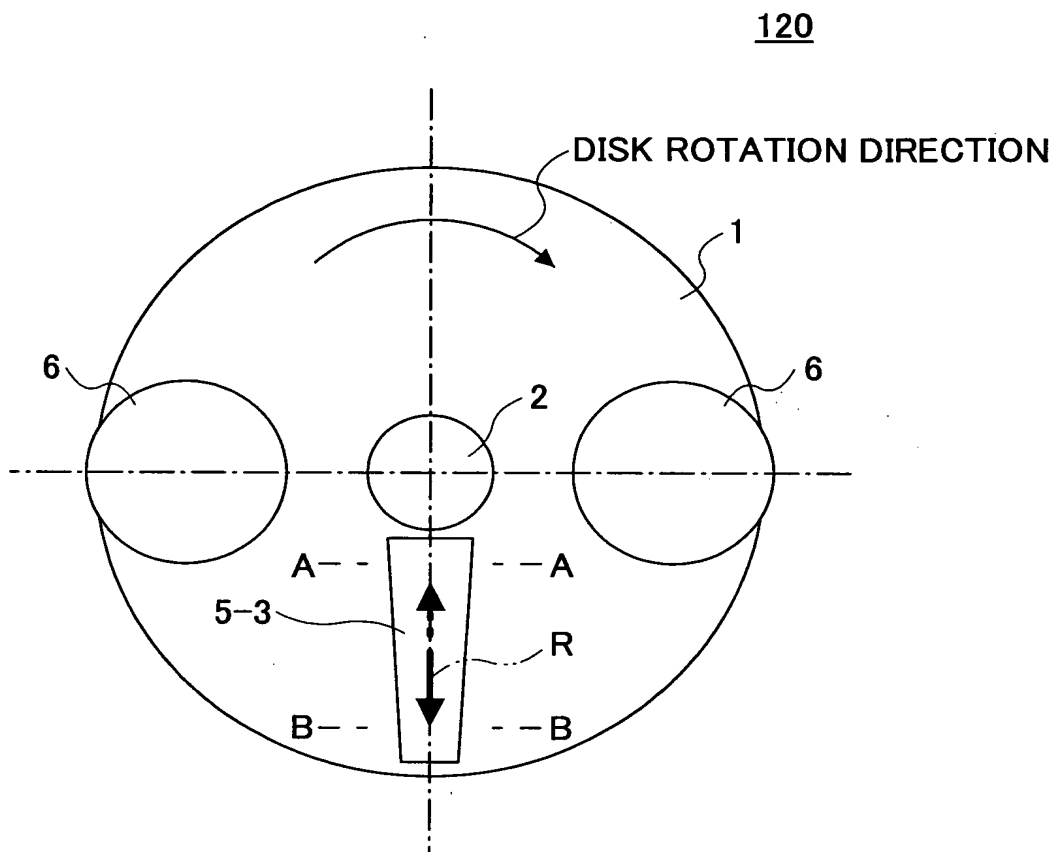


FIG.59A

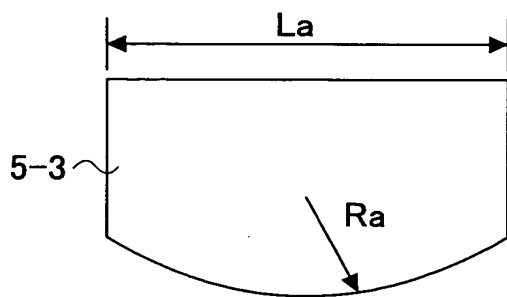


FIG.59B

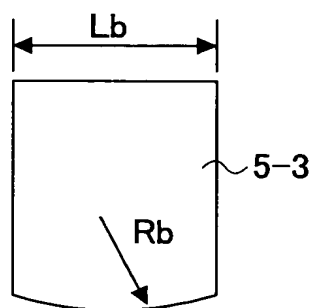


FIG.60

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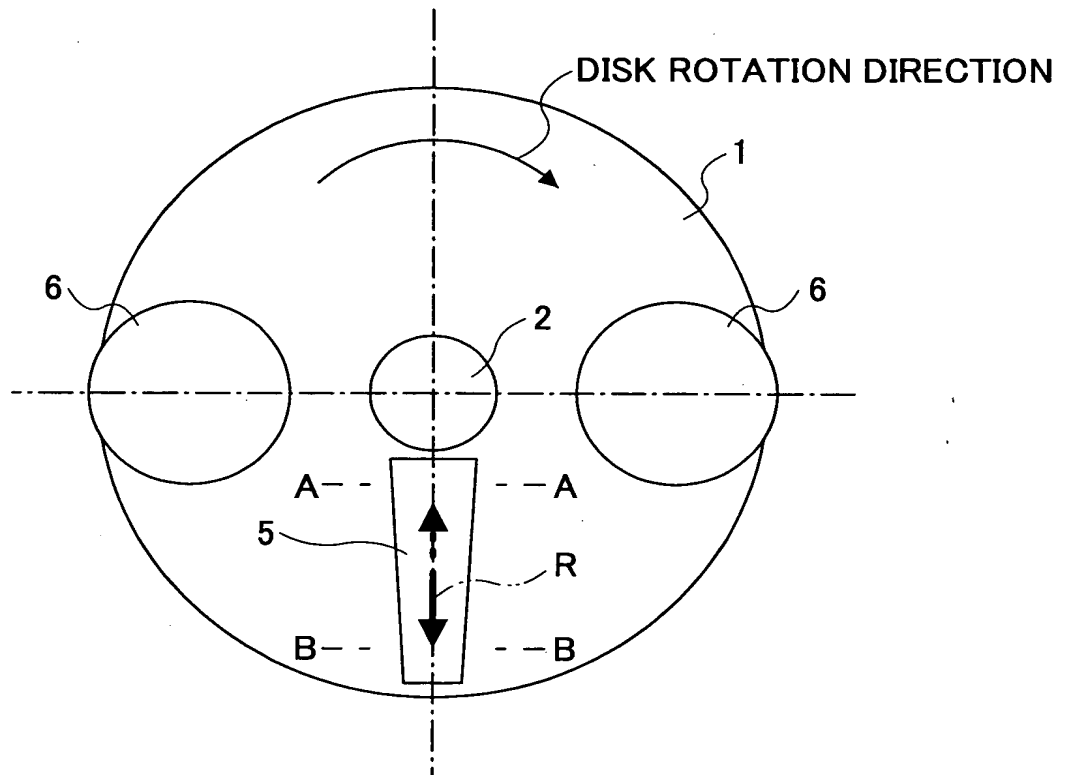


FIG.61A

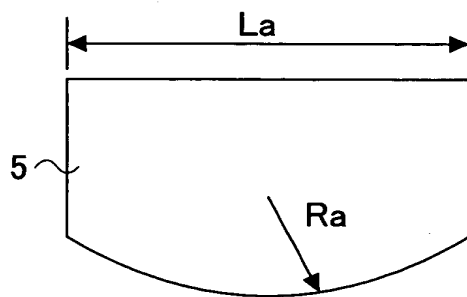


FIG.61B

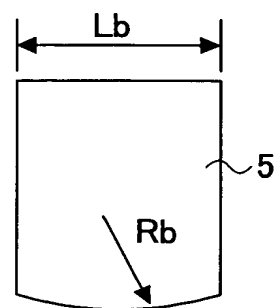


FIG.62

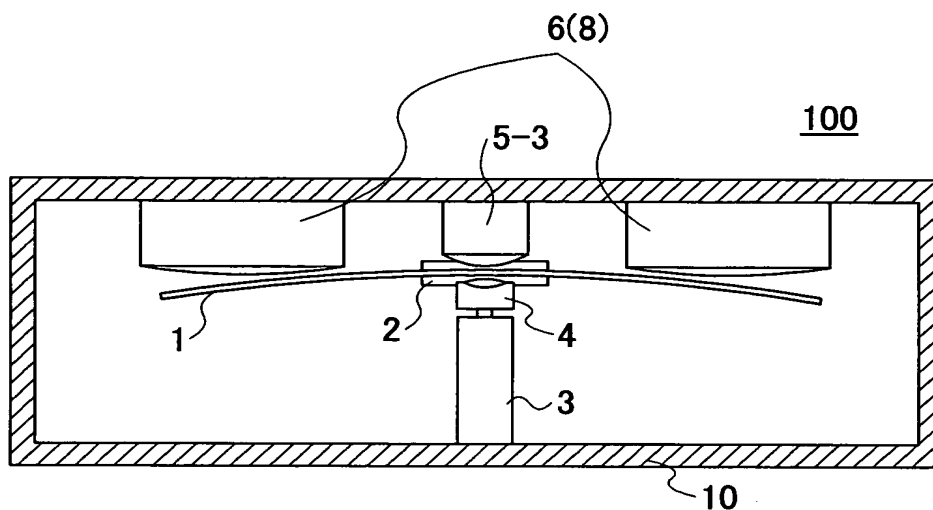


FIG.63

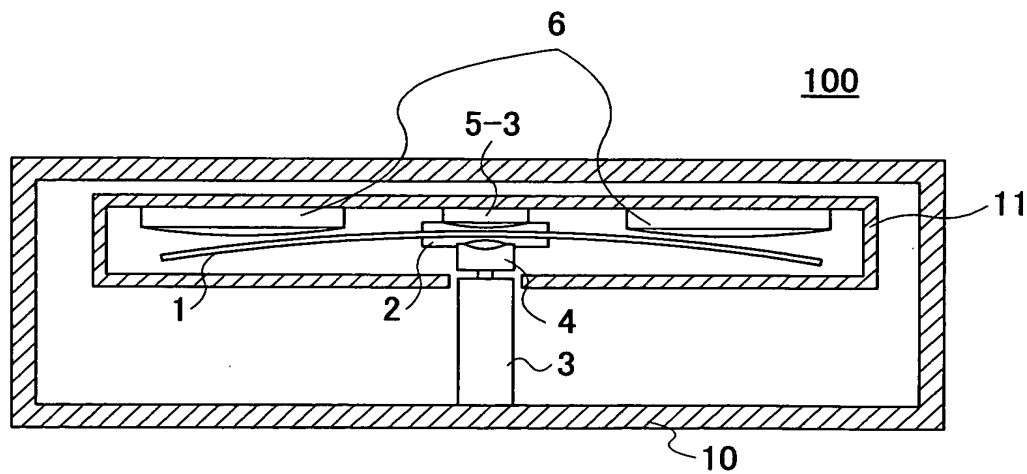


FIG.64

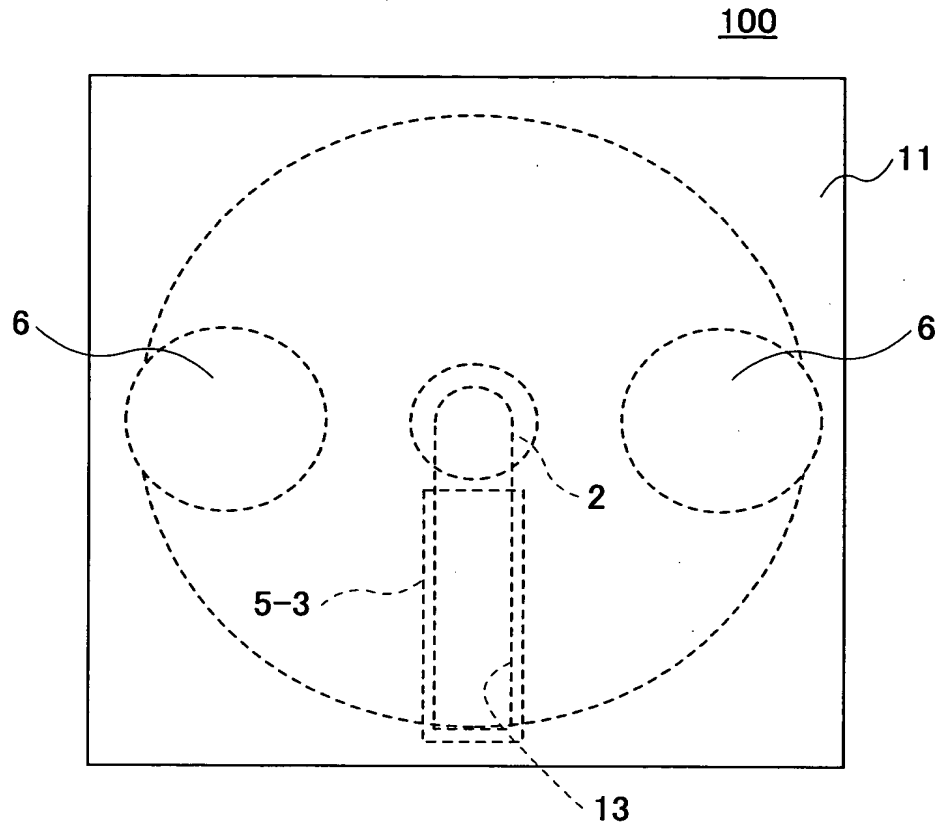


FIG.65

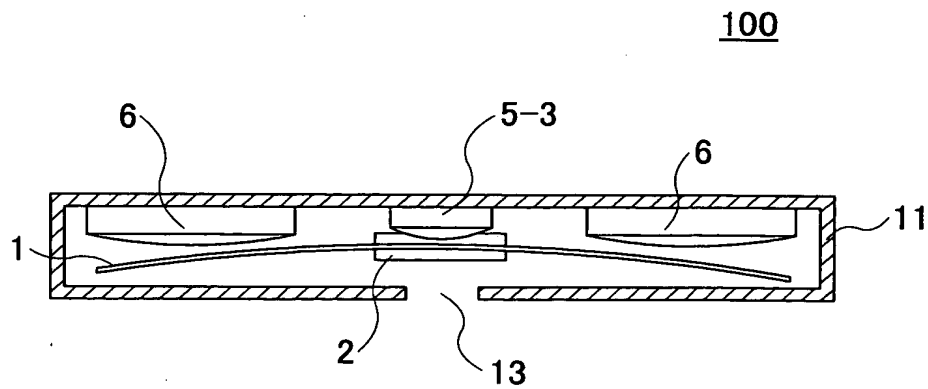




FIG.66

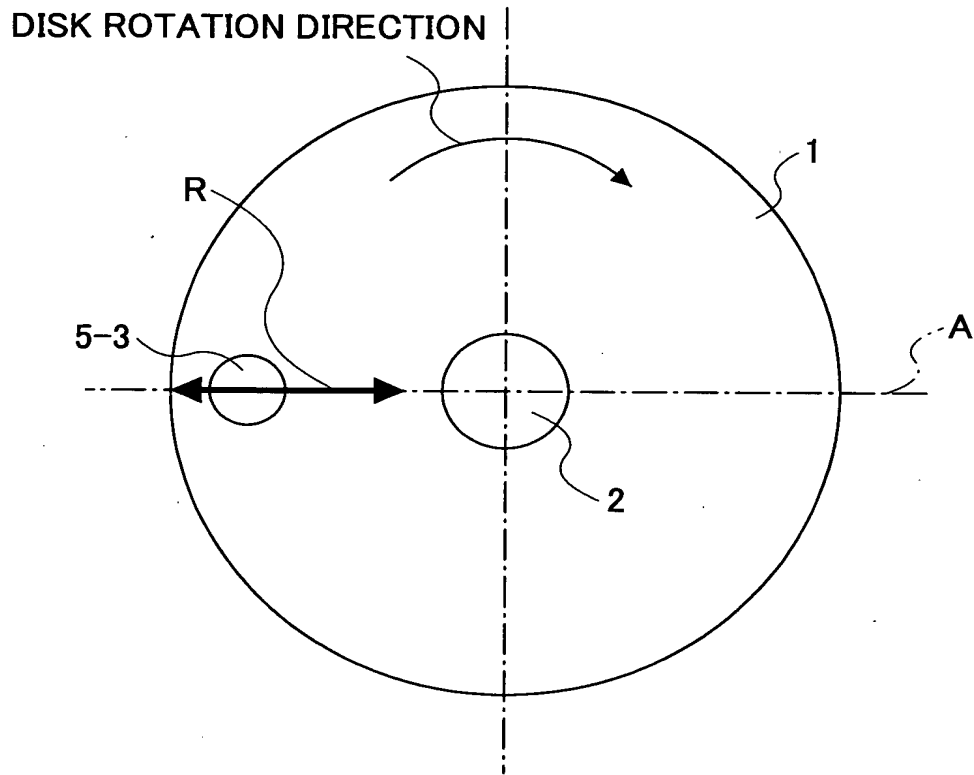
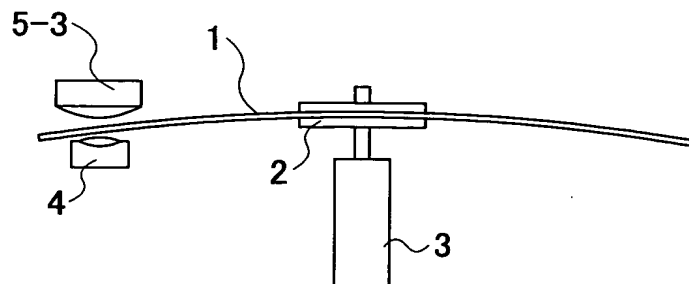


FIG.67



## FIG.68

	SIDE-RUNOUT AMOUNT [ $\mu$ m]		
	LOCATION OF RADIUS 25mm	LOCATION OF RADIUS 40mm	LOCATION OF RADIUS 58mm
EMBODIMENT 14	8	10	12
EMBODIMENT 15	8	8	8
EMBODIMENT 16	8	8	8
EMBODIMENT 17	8	8	8
EMBODIMENT 18	7	7	7
EMBODIMENT 19	8	8	8
CONPARATIVE EXAMPLE 1	30	40	50
CONPARATIVE EXAMPLE 1	6	7	5